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OBSERVATIONS ON VALVULAR DISEASE OF THE HEART: ILLUSTRATED BY CASES.

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[*Read at the Medical Society of London, Oct. 19th, 1850.*]

There is, perhaps, no department of medical science in which such rapid and satisfactory progress has been made of late years, as in the Diagnosis and Pathology of the Diseases of the Heart. At the commencement of the present century, very little accurate knowledge was entertained concerning the morbid conditions of this important organ; and it is painful to reflect upon the serious errors in practice, which must have arisen when cardiac pathology was in a state of obscurity. The great work of Laennec, while it investigated and described with considerable accuracy the diseases of the lungs, and threw a flood of light upon their treatment, failed in giving a similar degree of precision to the physical examination of the central organ of the circulation. When I was a student in this metropolis, the Diseases of the Heart were in progress of investigation by a number of acute and laborious observers; but, even in the best schools of medicine, the nature of the healthy sounds was still a matter of doubt, speculation, and discussion; while the morbid sounds, although attentively observed and accurately described, were not attributed, in all cases, to their real causes, or connected with their true pathological conditions.

At the present day it may be said, I think without exaggeration, that the diagnosis of the Diseases of the Heart is now so well understood, that it may be almost ranked among the number of the exact sciences. The labours of our illustrious countryman Dr. Hope, and the no less important researches of Dr. C. J. B. Williams, have left hardly any room for doubting the accuracy of the laws which are now laid down as guides for the physical investigation of the Heart. The healthy sounds have been referred to their true causes by experiments and reasonings so satisfactory and conclusive, as to carry conviction to all rational minds; while the morbid sounds have not only been accurately connected with their true pathological phenomena, but have been localised

with such precision, that it may be almost said, that we could hardly discern the morbid condition of the Heart with greater clearness, if the organ itself, and its thoracic coverings, were constructed of transparent materials.

By this species of knowledge, diligently acquired and faithfully followed up,—the facts and conclusions of our great writers being carefully stored in the mind, and subsequently confirmed by physical examination during the life-time of the sick, and by the revelations obtained by the scalpel after death,—by such means, the knowledge of the nature and treatment of cardiac disease has been improved to an incredible extent: human sufferings have been often alleviated, or abridged; latent mischief has been detected, and arrested in its progress; and life in many instances, has, undoubtedly, been prolonged. But it may, I think, be fairly asked, whether this branch of medical science has not been pushed somewhat too far in modern days; and whether, led away by the brilliancy of the researches into cardiac diseases, and fascinated by the simplicity which now attends their physical investigation, some practitioners do not now lay too much stress upon the aids derived from auscultation, and neglect the attendant phenomena, which modify the healthy and morbid conditions of the central circulatory organ?

The structural derangements of the Heart have always been justly regarded as matters of the highest importance, and as demanding the utmost attention on the part of the medical profession. The deep interest attached to this class of diseases, by the profession, has been extended to the public in general; and an anxiety, of the most painful nature, is often entertained by patients, and their relatives, regarding the real, or supposed, existence of organic Disease of the Heart.

It would be insulting to a Society so enlightened as that which I have now the honour to address, to point out the marks of distinction which exist between real, and supposed Disease of the Heart; between the symptoms which sometimes spring from the exalted imagination of the patient, and those which denote actual organic mischief; between the indications which involve only partial and, perhaps, transient derangements of its functions, and those which prove an alteration in its structure. But I may be permitted to observe, that notwithstanding the excellent books and lectures published upon the subject, and notwithstanding the facilities offered by our great hospitals, the diagnosis of Heart-disease is by no means so generally accurate as it might be; and it has fallen to my own lot to find members of our profession, even among those who hold a very respectable rank, commit rather serious errors in this respect. Still, setting aside the mistakes of inaccurate observers, there can be no doubt that organic affections of the Heart are at present among the most common, as well as among the most fatal diseases.

Of all the organic diseases of the Heart, the morbid conditions of the valves have, perhaps, been regarded as the most formidable. It is easy to conceive that either hypertrophy or dilatation, or both, may exist, and yet, if the valves be sound, the life of the patient *may* not be seriously threatened, nor his health materially impaired; the channels of the circulating fluid are still free and patent, and the condition of the heart's muscular structure would not appear, arguing *à priori*, to

influence the current to a dangerous extent. But when there exists a diseased state of the valves, whether it consist of thickening, of rigidity, of ossification, of vegetations upon their surface, of malformation, or of deficiency; then it is clear that a material impediment is opposed to the circulation of the vital fluid, just as the current of a river would be impeded if a mechanical obstacle were placed across the stream. When we observe the beautiful mechanism of the cardiac valves, and contemplate their functions in health—the facility with which they make way for the passage of the blood, and immediately stretch themselves across the aperture to prevent its return—we could not but conclude, if we argued from physiological data alone, that any causes which should mechanically impede the onward passage of the blood, or which, by preventing the closure of the valves, should allow of its regurgitation, would be followed necessarily, and rapidly, by the most alarming and fatal consequences. But clinical observation teaches us, that while distressing symptoms, and fatal results often follow hypertrophy and dilatation without any disease of the valves, yet that the most serious diseases of the valves may be unattended with any remarkable symptoms, and may not tend either to shorten life, or to derange materially the health. I wish that I may be understood not to express an opinion that *any* organic diseases of the heart are without danger; but, I think, I may appeal to the records of clinical medicine to support the propositions just laid down.

The fact that murmurs of a very loud and distinct character have often been heard during the course of several years, without serious derangement of the patient's health, has been admitted, and commented upon, by authors; but, as far as I can learn, the explanation usually given is, that the morbid condition, whatever it may be, is only in a nascent or a rudimentary state, and that its development has been arrested by the conservative powers of the system, or by the appliances of medical art; and, indeed, it cannot be denied, that such an explanation is, in many cases, quite satisfactory. And it has been very correctly stated that the loudness and distinctness of the murmurs are by no means proportionate to the extent or importance of the diseases which originate them; and a very trivial cause, such as the presence of a slight vegetation upon one of the valves, has often produced a very loud murmur. Dr. C. J. B. Williams, in a very valuable paper on Organic Diseases of the Heart, published in the LONDON JOURNAL OF MEDICINE for April last, gives an admirable case in illustration of this point. The patient was a man aged about thirty, in whom there was a very loud murmur, following the second sound; it was most distinct in the midsternum, but it was also heard in every part of the chest, in the arteries of the neck, and, although faintly, even in the radial artery at the wrist. This patient, as Dr. W. informs us, was kept in the hospital as a kind of stethoscopic curiosity. But it unfortunately happened that he caught typhus fever, of which he died; his death being quite unconnected with any severity of cardiac symptoms. On examining the body, the ventricles were found moderately enlarged and thickened. The valves were all healthy, except the aortic; and the only morbid appearance was, that one of them had the free margin neatly retroverted, so as to leave a fine, smooth chink for regurgitation.

It is evident, I think, from the tone of Dr. Williams's remarks, that he considers the loudness of the murmur to be no criterion of the extent or importance of the cardiac disease, in which opinion he is undoubtedly confirmed by abundant facts: but I think that he, and many other authors, conclude that, when a patient exhibits for a considerable period a cardiac murmur, the disease is generally of a slight or rudimentary, and therefore not of a dangerous character. I think I am in a condition to prove that *Valvular Disease of a most formidable and extensive nature, may exist for several years without compromising health to a serious extent, and without abridging the usual term of human existence.*

The cases which I am about to adduce are, I think, quite decisive, and, I believe, free from objection. I have carefully excluded the cases of persons still living, and also cases in which I had no opportunity of making a post-mortem examination; because I maintain that however veracious may be the character of the observer of cardiac disease, it is impossible, without observation of the phenomena exhibited after death, to consider any case as complete and wholly satisfactory. I may here observe, in passing, that without absolutely discrediting the accounts of cases which are continually published, wherein the patients have recovered, or in which no post-mortem examination has taken place, I am extremely sceptical upon the subject; and when I read of wonderful *cures* of fatal diseases, such as phthisis, and cancer, by the appliances of hydropathy or the trivialities of Hahnemannism, I am led to say "*Credat Judæus Apella, non ego.*" The fact is, that our knowledge of pathology is still in its infancy, and the most accomplished and eminent members of our profession are as much distinguished for their modesty as for their splendid abilities:—but "*fools often rush in*" where "*angels fear to tread.*"

My cases therefore are limited to three. In all of them I think it must be admitted that Valvular Disease of the most serious character had existed for a considerable number of years, without entailing upon the patients any remarkable amount of suffering, and without shortening the period to which human life is generally extended. Such cases as those I am about to offer to the notice of the Society may be, and no doubt are, often met with and described; but I confess that the history of chronic diseases and of latent organic defects in the human system has hardly seemed to me to meet with the attention which their importance deserves.

With the first patient I was but little acquainted, having seen him only for a few days before his death; with the second, I was acquainted for upwards of ten years, although not in a medical capacity, and simply because the patient never felt any symptoms requiring professional notice; with the third patient, I was also well acquainted for about ten years, and had abundant opportunities during that period of studying the stethoscopic phenomena.

CASE I. DISEASE OF AORTIC AND MITRAL VALVES, APPARENTLY OF LONG STANDING. DEATH AT SEVENTY YEARS OF AGE. J. H., æt. 70, formerly a seafaring man, had been ill for some months before I saw

him, which was in November 1846. I was asked to see him at a house where he lodged; he was standing up and dressed, but he complained of great debility, with cough, and some expectoration. He made no particular complaint concerning his chest, but on applying the stethoscope, I found that he was affected with serious Valvular Disease of the Heart, the indications of which will be presently noticed. I recommended his removal to the Islington Infirmary, in order that he might have more care taken of him than he experienced in his lodging, and also that I might examine the progress and result of the case with greater accuracy. He was accordingly removed, and I saw him again on the 9th of November 1846, when the following symptoms presented themselves. He was lying in bed, still complaining of great debility, with cough and some difficulty of breathing. The urine was scanty and high-coloured, but he had no swelling of the legs, nor any appearance of dropsy in any other part. The pulse was 104, very feeble and regular, the bowels open, the tongue moderately clean.

Physical Signs. Percussion gave no peculiar sound. Auscultation of the lungs gave no morbid indications. Auscultation of the heart gave a distinct but not very loud bellows murmur, accompanying the first sound of the heart, and prolonged so as in great measure to conceal the second. This murmur was heard at the apex of the heart as well as at the base, and there was no appreciable difference in the quality of the sound in either situation. The murmur was not to be traced far above the base of the heart, and it was not heard at all over the carotid arteries. The impulse of heart was not increased.

Diagnosis. Disease of mitral and aortic valves. I find it recorded in my notes made at the time, that the general appearance of this man was not indicative of the serious disease under which he laboured, and he merely looked like a person suffering from age, poverty, and privation. He was ordered to have a light and nutritious diet, and to take a mixture containing some tincture of henbane and a little ipecacuan wine; but he died the next morning rather suddenly and unexpectedly, after passing a restless night.

Post-mortem Examination twenty-four hours after Death. The body was that of a somewhat spare man, but was not emaciated. The *Head* was not examined. *Chest.* There were numerous adhesions between the costal and pulmonary portions of the pleura, which membrane was thickened in some parts. The lungs themselves were not materially diseased. The heart was somewhat enlarged, the apex being situated below the sixth rib. The right auricle and ventricle, with their valves, were quite healthy. The left ventricle was slightly thickened. The mitral valves were thickened with a cartilaginous deposit, but the auriculo-ventricular opening was patulous. The aortic valves were excessively diseased. Viewed from above, they appeared to be stretched entirely across the aorta, meeting in the centre, and allowing only a very small chink for the passage of the blood. Each valve was encrusted by a thick osseous deposit, of a nodulated character, which rendered the valve perfectly rigid. Viewed from below, the convex surfaces of the valves were seen to be also thickened with osseous deposit. There was likewise a deposit of bony laminæ in the aorta itself, a little above the valves. *Abdomen.* The liver was of natural size, but congested, and when

cut, it presented the nutmeg appearance. The kidneys were healthy. The other viscera were not minutely examined.

In this case, there was obstructive disease of the aorta of the most formidable character, together with regurgitant disease of the mitral valves. It is, I think, impossible to doubt that the disease must have lasted for a considerable time, and yet the man attained an average old age, and did not, so far as I could ascertain, suffer any very severe or distressing symptoms.

The next case, however, is more satisfactory, because I was personally acquainted with the patient, and I know that she suffered no remarkable symptoms whatever.

CASE II. DISEASE OF THE MITRAL AND AORTIC VALVES, APPARENTLY OF LONG STANDING. SUDDEN DEATH WITHOUT ANY PREVIOUS ILLNESS AT SIXTY-NINE YEARS OF AGE. Mrs. K., æt. 69, was a lady of very active habits, of mild and benevolent disposition, temperate and abstemious, of rather tall stature and spare figure; she had always enjoyed good health, with the exception of an inflammatory attack about twelve years before the date of the present history, but the exact nature of the disease I had no means of ascertaining. Although intimately acquainted with her and her family for ten years previous to her death, and although I was the medical attendant of the family, I had never known her to complain of any illness. Since her death, however, I was informed that she suffered occasionally from slight attacks of dyspepsia, and also from difficulty of breathing and faintness, but the symptoms were very transient, and never required medical assistance. From personal knowledge I can state, that she was by no means a person of sedentary habits, as she was continually attending to the duties of a large house, and I met her walking in the streets almost every day. On Monday, June 27, 1843, about four in the afternoon, I was requested to see her immediately, as she had fallen down in a fit, although she had been previously in perfect health. At the time of the attack she was standing in the kitchen, superintending the affairs of the family, when she suddenly fell down. As I lived at that time next door to her, I arrived immediately upon being summoned, and found her lying on the floor with a pale countenance and very feeble pulse, and quite insensible. I was wholly at a loss how to account for her condition, as I had never known her to be ill during my whole acquaintance with her. I succeeded, with assistance, in placing her upon a sofa. Mustard poultices were immediately applied to the feet, and spirits of hartshorn held to the nose, but we had scarcely laid her down, when she expired.

Post-mortem Examination forty hours after Death. There was lividity on many parts of the body, apparently from gravitation, the lividity being chiefly observable on the under surface. Very little fat beneath the skin. *Head.* The vessels of the scalp were somewhat congested. The skull presented no remarkable appearance. The dura mater was slightly adherent to the inner table of the skull on the left side. Some fluid blood was found lying between the skull and the dura mater. The arachnoid membrane was somewhat opaque, and there was a considerable quantity of thin serous fluid effused beneath it; the veins of the pia mater were congested, especially in the posterior part of the

brain. The brain itself, with the exception of being a little softer than is usual in persons of the age of the deceased, was quite healthy; and the only appearances worthy of notice were the effusion of some fluid and the congested state of the meningeal vessels above described. *Chest.* The lungs were quite healthy, with the exception of slight congestion. The heart appeared externally to be larger than usual, but not remarkably so. There was very little fluid in the pericardium. The right auricle and ventricle, with their valves, were perfectly healthy. The left auricle was also healthy. The mitral valves were thickened by a deposition of semi-cartilaginous substance. The parietes of the left ventricle were very much thickened, but the cavity was of the usual size. The aortic valves were found very much diseased, and on looking at them from above downwards from the aorta, they appeared completely to close the passage. They were found to be converted into masses of bone, which nearly filled up the valvular orifice, leaving only a small chink for the passage of the blood. These bony masses were rough and nodulated, and were deposited apparently within the sinuses of the valves, and one portion of great size extended from one of the valves down into the cavity of the ventricle. The lining membrane of the aorta also presented a great number of bony plates. *Abdomen.* The liver presented no remarkable appearance. The stomach was full, the deceased having eaten her dinner a short time before the fatal occurrence. The kidneys were congested, and their cortical substance presented a somewhat granular appearance.

In this case of remarkable disease of the valves, the patient had enjoyed almost uninterrupted good health, and was in much better health, indeed, than most persons at her age. Nor can it be said that her immunity from unpleasant symptoms, and the delay of the fatal termination, was owing to care on the part of her friends, or to the indulgence of rest; for she was a person of great activity, both of mind and body.

The next case, however, is the most satisfactory of all; for the patient, who suffered from Valvular Disease of the Heart to an enormous extent, actually lived to the age of *eighty-three*! and died, eventually, of another complaint. With the history of this case I was well acquainted. I made the diagnosis of serious Valvular Disease nearly ten years before her death; and in the spring of this year, 1850, I had the gratification of confirming the correctness of my diagnosis, as well as of strengthening the opinion which I have been lately induced to entertain, that Valvular Disease, to a very great extent, *may* exist without shortening human life, or much impairing its comfort. I brought the heart, with a great portion of the aorta, and of the arteries of the head, to the Westminster Medical Society; and those who were present on the occasion will recollect the immense accumulation of osseous matter in the aortic valves, along the course of the aorta, and in the carotid and cerebral arteries.

CASE III. EXTENSIVE DISEASE OF AORTIC AND MITRAL VALVES. DEATH AT THE AGE OF EIGHTY-THREE. Grace Darton died on the 4th April, 1850, æt. 83. The history of the case was as follows. The patient was a thin, emaciated woman, of a pale complexion, and mild, submissive appearance, who had long been an inmate of the Islington Workhouse.

I began to attend her in 1840, and had seen her from time to time since that period. She stated that she had had several attacks of rheumatism previously to my attending her, and that she had been bled three or four times for those attacks. She had not suffered from any of those symptoms which are usually considered among the prominent rational indications of Heart-Disease; such as swelled legs, palpitation, shortness of breath, etc.; and although she came into the infirmary at various times, for several ailments, it was never on account of any cardiac symptoms: and it was only by auscultation that I became aware that she had any affection of the heart. In fact, I was disbelieved as to the existence of any serious disease in her heart; and although I frequently recommended that she should be kept in the infirmary, and be constantly under medical superintendence, my recommendations were disregarded.

In the year 1840, (æt. 73,) she had an attack of diarrhœa in March, which readily yielded to medicines. In August, she had an attack of chronic rheumatism, for which she was ordered a dose of calomel and jalap, and a purgative mixture: under this treatment she recovered, and was reported cured on the 11th of September.

Feb. 8, 1841. She had an attack of influenza; for which she was ordered a mixture, consisting of tinct. hyoseyani ʒij, sulph. magn. ʒss, inf. sennæ, aq. menth. aa. ʒiij. During this attack she had some dyspeptic symptoms, for which she took carb. of magnesia, with sulph. of magnesia, and aqua menthæ. She was reported cured on Feb. 20.

January 1842. She was seized with an attack of catarrh, for which she was treated with mild purgatives: but an attack of chronic bronchitis supervened, for which a blister was applied to the chest, and she was ordered to take gr. xij of ipecacuan immediately, and afterwards to take the following: R. vin. ipecac. ʒiij; sulph. mag. ʒij; inf. sennæ ʒvj. Sumat coch: ij magna 4tis horis. During this attack the state of the heart and lungs was particularly examined, when it was found that, besides mucous, sibilant, and sonorous rattles over the lungs, there was a loud rasp sound over the region of the heart. This sound was very loud, and much prolonged, taking the place of the first natural sound, and almost obscuring the second. This sound was heard most loudly over the base of the heart, and extended over the region of the arch of the aorta, and the right side of the neck. The impulse of the heart was not stronger than natural; pulse 80, regular. I should here notice that the pulse was always regular, and feeble, whenever I examined it. The treatment was directed, in the first place, to the relief of the bronchitic symptoms, which were removed by the measures indicated above, and by others of the same nature; and on the 4th of Feb. 1842, the expectoration had diminished, and the râles had disappeared. The rasp sound, however, still remained as loud as ever, and I was convinced that the woman had confirmed and serious disease of the aortic valves. I thenceforward, therefore, always adopted a somewhat tonic method of treatment; recommending vegetable tonics, with light nutritious diet, and avoidance of exertion.

May 30, 1842. She had an attack of lumbago. A mixture was thus prescribed:—R. vin. colch. ʒij; inf. gent. co. ʒvj. Sum. coch. ij magnæ 4tis horis. Under this treatment she was again reported

cured. On the 19th of October 1842, she had an attack of English cholera, which was successfully treated by carbonate of magnesia, and sulphate of magnesia in peppermint-water. On the 2nd of July 1843, she had an attack of common fever, from which she suffered for a week, but eventually recovered, by the use of febrifuge medicines, and diluent drinks.

Sept. 8, 1845. She had a cutaneous eruption, attended with great itching, which I determined to be *prurigo senilis*. This was treated by mild aperients.

June 12, 1846. She had another cutaneous affection, attended with itching, which I regarded as lichen, and for which I ordered her twenty minims of liq. potassæ, in one ounce of compound infusion of gentian, three times a day. This treatment was continued till the 17th of June, and the eruption disappeared.

Oct. 5, 1846. She now complained of faintness, nausea, want of appetite, and a disagreeable taste in her mouth. She said that she had lately suffered from palpitation of the heart, and difficulty of breathing, when she exerted herself. She passed her water freely; never spat any blood; and had no swelling of the legs: bowels open, tongue clean, no thirst, pulse 58, quite regular, and weak. *Physical Signs.* The impulse of the heart was not increased, but the loud, sawing murmur was heard over the base, completely superseding the first sound, and was much prolonged; but a second, though much shorter murmur, was heard after it. Towards the apex of the heart, this murmur was also heard, but not so distinctly; it was distinctly heard over the region of the arch of the aorta, and over the right carotid artery. The diagnosis was still, of course, that the chief disease lay in the aortic valves. She was directed to take a moderate diet, consisting of mutton-broth, bread, milk, and tea; and to take the following medicine: *R. Acidi sulphurici diluti, m v.; inf. gent. co. ʒi. Quartis horis sumend.*

Oct. 7. Much the same; dyspeptic symptoms remain; she complains of great faintness. She was ordered, in addition to the above treatment, to have half-a-pint of porter daily, and to remain in the infirmary.

From that time, until very lately, I had not many opportunities of seeing this woman; and I heard that she died (without manifesting any particular symptoms beyond those resulting from her great age) on the 4th of April 1850, aged eighty-three.

Post-Mortem Examination thirty-six hours after Death. The body was emaciated; the legs were slightly œdematous; right side dull on percussion. *Head.* Scalp natural; cranium very thick, especially at its posterior part; sutures all obliterated; dura mater healthy, very firm, and dense; arachnoid membrane of a pearly, opalescent appearance, due to the presence of serum below its surface, which escaped on making an incision. The brain itself was moderately healthy; no softening, nor extravasation, in any part; arteries of the brain rigid and patent, owing to osseous and cartilaginous deposition,—this was especially the case in the ophthalmic, vertebral, and internal, carotid arteries; very little fluid in the ventricles. *Chest.* Left lung appeared of its natural colour and consistence; right pleural cavity contained a large quantity of fluid. About 3xx of serous fluid were removed from this part; and in the fluid there was a

large mass of coagulable lymph, very soft, and of the consistence of thin jelly. Right lung healthy, and crepitant at the apex; but below, the texture was of a very dark colour, friable, and heavy, so that it sank in water. On cutting into this portion of the lung, it was found very much congested, did not crepitate, and, on squeezing it, a bloody serosity flowed out. On this side, therefore, there was acute pleuro-pneumonia, which was probably the immediate cause of the woman's death. The heart, seen *in situ*, occupied its natural position, and the apex was placed between the fifth and sixth rib. After removing the lung on each side, the heart, with the arch of the aorta, the innominata, the left subclavian and carotid, and the whole of the thoracic aorta, were all carefully dissected out, and removed together. The right auricle was natural; the tricuspid valves were patent, and admitted three fingers; but the attached margins were rather hard, and thickened. The semilunar pulmonary valves were natural; but the orifice was somewhat contracted. The left auricle was natural; the mitral valves admitted two fingers, but they were thickened and hardened, and contained a considerable quantity of osseous matter; the walls of the left ventricle were rather thickened, but not very considerably. The aortic valves were completely rigid, and converted into bone; and they met in the centre, leaving only a small chink at their juncture in the middle line. Looked at from above, the valves were seen stretched across the aorta, and each of the valves contained, in its sinus, a large mass of bony deposit. The ascending and transverse aorta were very much dilated, being, at least, twice their natural diameter; the innominata was also very much dilated. The lining membrane of all these parts was most extensively diseased, part being converted into atheromatous matter, part exhibiting numerous plates of bone, and part being ulcerated. These appearances were found in many other arteries,—not only in the cerebral arteries already described, but also in the subclavians and carotids. *Abdomen.* Liver congested, of very dark colour, and friable; spleen very small, congested; kidneys small, but not apparently diseased.

This, then, was a case of extensive Valvular Disease of the Heart, in a patient who suffered hardly any of the rational cardiac symptoms, but who was attended, at different periods, for various ailments, as diarrhœa, chronic rheumatism, catarrh, chronic bronchitis, lumbago, prurigo senilis, dyspepsia, and, finally, died at the advanced age of eighty-three, of an acute attack of pleuro-pneumonia.

1. GENERAL REMARKS. The cases which I have ventured to bring before the notice of the Society, are of very considerable practical importance. Whatever theoretical views may be entertained to account for the endurance of life, and the possession of a moderate degree of health, under circumstances apparently so unfavourable to either, it is impossible to deny that the facts themselves are of great value.

In the first place, if it can be proved that actual organic Disease of the Valves of the Heart may exist for a considerable period, and without shortening the average duration of life, such a conclusion may tend to divest this class of maladies of some part of the terror which their existence now so commonly inspires; and a patient, who is unfortunately

labouring under a disease of this description, may nevertheless be encouraged by the reflection, that a Disease of the Heart, although of a decidedly serious character, may not prematurely put a stop to his career. And if such be the consolation which may, I think, fairly be afforded to those suffering under confirmed and extensive disease, how much more applicable is it to those who are affected only by some of those minor affections of the heart and its valves, which occur so frequently among the sequelæ of rheumatism?

In the second place, the subject is one of great importance in its relation to the average duration of human life, and the practice of life insurance. The existence of any disease of the heart is, I believe, an insurmountable barrier to effecting a policy of insurance; but I think it probable, that in proportion to the accumulation of facts bearing upon the subject, the deductions drawn only from the physical exploration of the heart, will not be so exclusively regarded as they have been of late years. But upon this point I wish to be understood as offering a very guarded opinion; for I have no wish whatever to undervalue the importance of the information derived from auscultation; nor do I pretend to assert that the existence of cardiac disease is a matter of slight moment. All I presume to argue is, that cardiac disease, even of a very decided and extensive character, *may* be compatible with long life and with moderate health.

2. THE TREATMENT OF Valvular Disease of the Heart is a subject of too great extent and importance to allow me to offer more than a few very general observations in the present paper. Notwithstanding the opinions which I have ventured to express, I consider the existence of Disease of the Valves to be a matter deserving the closest attention of the practitioner, and the most zealous application of the resources of his art. Hence it is essential that the disease should be checked, if possible, at its *commencement*.

“Principiis obsta; serò medicina paratur
Cum mala per longas convaluere moras.”

In the early stage of Valvular Disease, the stethoscope is invaluable; it gives us the earliest intimation of its existence, and we are supplied with means for its repression. The patient suffering under the agonies of articular rheumatism is often unconscious of the mischief going on at the fountain-head of life; the stethoscope reveals the latent evil—vegetations of albumino-fibrine are encrusting the surface of the valves—but the judicious administration of mercury causes the absorption of the peccant lymph, and the channel of the blood is restored. And even when the disease of the valves is unfortunately confirmed, medical appliances may do essential service in alleviating the sufferings which often ensue, and in delaying or averting the fatal catastrophe. The palliative measures which ought then to be adopted, it is almost unnecessary to insist upon. The injunction of the necessity of rest, both of mind and body, will be frequently repeated; and the state of the digestive system will, of course, form a prominent subject of inquiry and of treatment. The use of digitalis, which I believe to be of the utmost value in some of the organic Diseases of the Heart, is, I think, contra-indicated in most cases of Valvular Disease, in which the current of the

blood is diminished, and the vital energies consequently impaired; in such instances, digitalis must undoubtedly do more harm than good, by lowering the force of the heart, and still farther enfeebling the circulation. In such cases, it is better to rely upon those measures which are calculated to strengthen the system, and to stimulate the heart to propel the blood through its diminished channel; and I adopt a somewhat tonic system of treatment under such circumstances, as the best calculated to counteract the effects of the valvular obstruction.

8, Torrington Square, October 1850.

CASE OF SOFTENING OF THE CERVICAL PORTION OF THE SPINAL CORD.

By EDWARD C. SEATON, M.D.

[*The substance of the following Communication was read before the Western Medical and Surgical Society of London, October 4, 1850.*]

It is remarked by Dr. Graves, that "Inflammation of the Spinal Marrow is a disease so liable to be confounded with a great variety of painful affections, that every ascertained case of it ought to be recorded, for the purpose of rendering more perfect a department of pathology already diligently, but not completely, cultivated." Obeying the injunction laid down by this great authority, and believing that the following case is not without its points of special interest, I venture respectfully to submit it to the notice of the profession through the pages of the LONDON JOURNAL OF MEDICINE, in which so many valuable contributions to our knowledge of Diseases of the Nervous System have lately appeared.

Mr. H. W., æt. nearly 50, by trade a wholesale and retail cheesemonger, and a man whose circumstances enabled him to command every comfort of life, consulted me on the 29th of July 1848. He was a spare man and rather short, of very temperate habits, married, and the father of a large family. He had enjoyed good general health, though he came of a rheumatic stock, and had himself suffered occasionally from rheumatic pain. During the preceding year and a half or two years, he had noticed that his urine was frequently turbid, and he had had one or two attacks of gravel. The complaints for which he sought relief of me were stiffness in the arms and thighs, and excessive debility on undertaking any exertion, so that he was hardly capable of lifting anything, and could not work in his shop for half an hour without becoming tremulous and unable to continue his labour. He had frequent cramps in his legs, but no persistent pain anywhere. At all times irritable in temper, he had become latterly much more so. His appetite failed him of a morning, but not in the latter part of the day. He said that his digestion was good, his bowels regular, and his urine at present clear. His pulse was feeble.

At the end of a fortnight his condition was the same. I thought I

noticed one day a tendency to droop in the left eyelid; but if this condition really existed, it must have been very transitory, for it was never afterwards observed. There was no difference as to sensation and power between the two sides of the body, and there were not then, as there were not indeed at any period throughout the case, any head symptoms.

He went into the country for a week, and his symptoms disappeared, but came back almost immediately on his return to town. The stiffness and debility, however, were now *confined* to the upper extremities (in which they had all along been most pronounced), and were felt chiefly of a morning when he *began* to work, or at any time when he *began* to take exertion: and he specially remarked to me that as soon as he got warm in walking, the stiffness went off, and he became comparatively strong, and that as soon as he got warm in his bed at night, there was absolutely nothing whatever the matter with him. A variety of treatment was tried with little or no impression; and on the 11th of September he again went into the country.

I next saw him on the 27th of November, when the pain and stiffness were increased in the upper arms, and had once more attacked the thighs. They were still influenced in the same manner by temperature. I had had some doubts, when I first saw him in July, as to the nature of the case with which I had to deal; but, after twice or thrice seeing him, I satisfied myself that the symptoms were more those of chronic rheumatism than of any other disease, and the treatment then had been adapted to this view of the case. Feeling now no reason for changing my diagnosis, I gave him again antirheumatic remedies, but of other kinds, which were continued till the 26th of December without any benefit, when he resorted, of his own accord, to cod-liver oil.

This was taken for two months, by which time (Feb. 26, 1849) his former symptoms were aggravated, and new ones superadded. The pain, stiffness, and powerlessness were greatly increased both in the upper and lower extremities, but were still confined nearly entirely to the *upper arms and thighs*. In these also, sensation was benumbed, and he said they felt to him as if stuffed out with straw. He had tripped many times of late, and fallen occasionally when walking, and he could not lift his feet far from the ground; *warmth, however, still relieved his pain and gave him power*. The cramp, of which he had all along had more or less, had been excessively troublesome to him lately. My original doubts as to the real nature of the case now returned with increased force; and I requested the opinion of Dr. Bright. We examined together with great care, as I had often done by myself before, the whole length of the spine, but found no tenderness whatsoever; neither did he refer to it any sensation of pain. But he informed us of this important fact (which he had not hitherto remembered, or had not thought of in connexion with his disorder), that about a fortnight previously to his first consulting me he had fallen forwards on the deck of a steam-boat, alighting on the palms of his hands, the arms being stretched out, and that he had thus received a shake which he felt through his whole system. On a review of the entire case, Dr. Bright was inclined to regard it as probably one of chronic inflammation of the spinal cord, or its

membranes, and recommended a succession of blisters down the spine, and the administration of bichloride of mercury.

This plan was pursued for a fortnight with no amendment, but rather increase of the symptoms: and it may serve as an illustration of the great difficulty of arriving at a satisfactory diagnosis of the case, that on a second careful examination at the end of that period, Dr. Bright considered it one of chronic rheumatism, and he mentioned to me a case in which the stiffness and the pain, and the powerlessness had been more pronounced, but which had eventually entirely recovered after anti-rheumatic treatment. He therefore recommended a return to remedies of this kind, and they were pursued steadily from 16th March to 24th April.

On this latter day, as he had made no progress, and his general appearance was anæmic, Dr. Bright recommended a trial of iron, and the mist. ferri comp. was administered in doses of $\mathfrak{zvi}$. three times a day. He became more powerless and felt much worse after commencing this medicine; he suffered from a sensation of gnawing and sinking about the præcordia, and his hands became daily more useless and were invaded by cramp. His urine deposited lithate of ammonia in large quantity. The iron was therefore discontinued, and salines substituted.

During the next fortnight, though the urine became clear, and the sense of sinking disappeared, more and more ground was lost, and some symptoms appeared which left the seat of the disease no longer doubtful. A difficulty in getting out his words, and, on some occasions, a difficulty in masticating and swallowing, pointed to some affection of the upper portion of the Spinal Cord or of the roots of the nerves:—and this was the diagnosis given by Dr. Watson, who was now consulted. It seemed more difficult to state precisely what the nature of that affection was. There had never been, and was not, the smallest pain referable to the cord itself, nor tenderness of any portion of the spine. His leading symptoms had been all along those of diminished and not of increased action; his pulse was always very feeble, and his appearance throughout pale and anæmic. Dr. Watson thought that a tonic regimen was indicated, and gave him first nitro-muriatic acid with tincture of lytta, and afterwards the sesquichloride of iron. He still got no better.

On the 23rd of June he was seen by Dr. Pidduck. On now examining the spine, a spot was found very tender over the atlas vertebra, and our patient said that for some months past he had felt severe pain there whenever he lifted his head from the pillow suddenly or without support. But I think that his recollection as to the duration of this symptom must have been at fault; for he had so repeatedly been questioned about pain and always denied it. He experienced even now no pain or difficulty in rotating, flexing, or extending the head. Dr. Pidduck agreed in the opinion that there was an affection of the Cord, but believed it to be of an inflammatory nature—the result of the injury received in the fall a week or two before the accession of the first symptoms. He recommended perfect rest, leeches to the tender part, and an alterative treatment.

The leeches were applied the next day, and that night, being the first night for many months, *he had no cramp*. On the 1st of July,

four more leeches were applied, and he had next day less numbness and more power of his arms, so that he was able to lift his cup to his mouth without assistance, (this he had not been able to do before for a long while). After this, he had leeches on several times, with the general result of diminishing his nervous irritability, and perhaps alleviating the pain felt in his thighs and arms, but with no further benefit; and the weakness increased. This was his condition up to the 28th of July, after which, in consequence of his having removed to a considerable distance from my neighbourhood, I only saw him occasionally,

The remainder of the history is soon narrated. The amendment which leeches and the antiphlogistic regimen at first produced not having continued (except that the cramp never returned), he was induced to try galvanism. After this, by the advice of Mr. Lonsdale, he had a seton. I saw him on the 21st of December, much more helpless, having been confined to his room for two months: he was then about to try homœopathic treatment. His homœopathic attendant, unable to relieve him, soon transferred him to his brother, a spinal surgeon, by whom he was induced to leave his comfortable home and become an inmate of a spinal institution. Here, though he received from day to day the flattering assurance that he was improving, he became more and more hopelessly paralytic, and died from exhaustion on the 27th of February, 1850.

Post-mortem Examination. His body was removed home, and an examination made sixty hours after death (on March 2, 1850), by myself, in the presence of Mr. Derbyshire and Mr. Theophilus Taylor.

The body was emaciated. The head and spine only were examined. The surface of the cranium was very exsanguine; the skull was rather thick and firmly adherent to the dura mater. The pia mater was rather congested. The brain itself, cerebellum, and medulla oblongata, were quite healthy; the ventricles were empty. The arches of the vertebræ in the centre of the back (about the sixth and seventh dorsal) were a little softer than natural, the rest were of the usual firmness. The theca spinalis was distended with serous fluid; the arachnoid lining it was quite transparent. The Spinal Cord was not unusually vascular, but healthy apparently, except about two inches of its cervical portion, beginning not quite two inches below the pons Varolii. This was softened into a putrilage, without any appearance to the eye of nervous structure. Examined under the microscope immediately afterwards, by Mr. Clover, of University College, it was found to contain exudation corpuscles in moderate abundance; but no pus globules.

REMARKS. The foregoing is one of a class of cases which are alluded to by Dr. Abercrombie¹ as presenting instances of a remarkable modification of ramolissement of the Cord; were described more particularly by Dr. Darwell in 1830, under the designation of a peculiar species of paraplegia; and which formed the subject of a portion of the interesting Gulstonian Lectures delivered by Dr. Gull before the Royal College of Physicians in 1849, and were by him termed, not inaptly, cervical paraplegia.² There are many cases of this form of disease now on record.

¹ On Diseases of the Brain, etc. Fourth Edition, p. 345.

² Lecture III. Medical Times, vol. xix, p. 505.

They agree generally in this, that it is in the superior extremities and adjacent organs that the symptoms first manifest themselves, the lower extremities being affected at a later period, or not at all; that the deltoid and muscles of the shoulder are those which suffer first; and that in a limb, the parts next the trunk are earlier and more completely paralytic than those more remote; the upper arm, for example, than the fore arm or hand: but their progress is by no means uniform; their duration and mode of termination are very uncertain, and their pathology is still a matter of doubt and obscurity.

The pathological explanation of them which is given by Dr. Abercrombie, is this: that they are dependent on disease of the Cord analogous to a form of disease of the brain in which there was originally inflammatory action of a low chronic character seated in a small part of the cerebral substance. "This," he says, "may continue for a considerable time in a state of simple inflammation, and subside; or it may terminate in a permanent change in the structure of the parts, generally with some degree of induration, in which condition it is found when the patient dies of another disease, but if it is itself the fatal disorder, it seems to be so by passing either into ramollissement or into partial and unhealthy suppuration." "It is probable", he adds, "that the same character of disease takes place in the Spinal Cord; and it is found in the same manner sometimes in a state of ramollissement, sometimes in the state of induration, and sometimes one part is found indurated and another softened."¹

A totally different view of these cases is presented by Dr. Gull. The disease is regarded by him as one not having its origin in the nervous centres at all, but in the periphery; "a primary affection", he says, "of the muscles", or an affection both of muscle, and of the nerve distributed to it; and he thinks that the disease spreads by travelling to adjacent muscles (and I presume in cases where ramollissement takes place, to the Cord), through the neurilemma. The cases which he cites in illustration of this position are ten in number; five of which were recorded by Dr. Darwell, and five occurred under his own observation. With one exception, they were all due either to a strain, or a blow upon the particular muscle or muscles, or to rheumatism. None of them had been fatal, but several had not terminated at the period of the report. It had been already contended by Dr. Graves,² that ramollissement and structural degeneration of the spinal marrow might arise, especially in the gouty diathesis, from the extension of inflammation from the extremities of the nerves along the neurilemma. He asserts this generally, and not with special reference to cervical paraplegia: but one of the cases narrated by him resembled this disorder, in the arms being affected for two months before the lower extremities, differing from it, however, in so far as the affection began in the fingers and extended up the arm.

The facts of the present case would seem, at first sight, to be not inconsistent with this view of the subject. My patient was of a rheu-

¹ Op. cit., p. 348. Dr. Abercrombie offers this as a *general* explanation of chronic ramollissement, whether commencing in, or confined to, the upper extremities (cervical paraplegia), or commencing in the lower.

² Clinical Lectures, vol. i, p. 475.

matic family, and had himself had, occasionally, rheumatism. The disease first made its appearance in the muscles which elevate the arms, and, excepting a transitory affection of a similar kind in the muscles of the thighs, was confined to them for nearly four months: the stiffness and want of power of which he complained, resembled rheumatism, by disappearing when the body was heated: and even when, at the end of six months, the affection had extended over the limbs generally, it so closely simulated this disease, that one of our most experienced physicians was unable to make a satisfactory diagnosis. In the view taken by Drs. Graves and Gull, the disease would all this time have been local; it would, about the period to which I have just referred, have invaded the Spinal Cord, by extension along the neurilemma, and would have caused that aggravation of existing symptoms and appearance of new ones, which took place about this time, but which did not, until nearly a twelvemonth afterwards, lead to a fatal termination.

But a closer examination of all the phenomena manifested, will, I think, show that a fuller and more accurate explanation of them is afforded by the older hypothesis. The commencement of the disease by the equal and simultaneous affection of both arms, coincident with an affection of exactly similar character in the thighs, appears to me to point to some central, or, at all events, some general and constitutional cause; and that this was not rheumatism, affecting a number of muscles at a time, seems probable, 1. From the powerlessness being out of all proportion greater than the stiffness and pain; 2. From the disease having originated, apparently, from the shock communicated to the whole system by a severe fall; and 3. From the existence, from the outset, along with the other symptoms, of one which was eventually proved to have been due, in this instance, to direct irritation, or inflammation of the spinal marrow; viz., cramp. I say eventually proved; for, having been one of the most constant, painful, and distressing symptoms throughout the whole course of the malady, and having resisted every remedy, and been scarcely alleviated by any, it at once yielded to the application of a few leeches over the inflamed portion of the Spinal Cord. Nor is it inconsistent with this view, that the symptoms, after three weeks duration, should cease, when my patient went into the country, and that, when he came back to town, they should return in the arms only, the thighs being no longer affected. I presume that, under the influence of rest, change of air, and freedom from excitement, the inflammatory, or congestive condition of the cord was spontaneously subsiding, and would probably have subsided altogether, had not premature exertion recalled it, and caused that, which was at first a diffused state of irritation, or congestion, to become localised as an inflammation in a particular portion of it.

Neither is it inconsistent with this explanation, that power should be restored to the muscles for a while, on excitement or the application of warmth, though it was this symptom, so common in one form of rheumatism, which tended more than any other to obscure the case. Moderate warmth is one of the most powerful excitants both of the muscular and nervous systems; and its influence in exalting the nervous energies, and elevating the vital powers, is referred to constantly by physiological writers.

In a case of *Ramollissement*, recorded by my friend, Dr. Madden, in the *LONDON JOURNAL OF MEDICINE* for January 1850, in which anæsthesia was the most prominent symptom, it was observed, that under the influence of a fit of excitement, followed by an attack of erysipelatous fever, the sensibility was greatly increased. "Was this", he pertinently asks, "due to the cerebral excitement? or might not the quickened circulation, in which the cord, in common with other organs, must have shared, have stimulated for a time its half-destroyed energies?"

And, lastly, it is no objection to this explanation, that so long a time should have elapsed before pain, or tenderness, of the spine came on. Little reliance is to be placed on these as signs of inflammation, or *ramollissement* of the cord. Of six cases occurring to Dr. Abercrombie, they were absent altogether in two, and there was pain only on pressure in one. And of eleven cases of inflammation, *ramollissement*, undefined suppuration, or abscess, to which he refers, they were absent, or not mentioned as being present in eight; and mentioned as present in only three. In my own case there was some evidence of an inflammatory state of the cord, in the remarkable aggravation of the symptoms caused by the administration of steel, for months before pain was complained of, or tenderness observed.

The conclusion to which I, therefore, incline is, that there was in this case, from the commencement, a state of low inflammatory action in a portion of the Spinal Cord, which, whether it did or did not pass through the series of changes presumed by Abercrombie, ended, at all events, in inflammatory softening. Whether this view be right or wrong, and whether the disease in question be central or peripheral in its origin, is obviously not a matter of mere pathological curiosity, but one of the deepest practical importance. By applying our remedies away from the real seat of the disorder, we are not only losing time, but are losing, probably, the only opportunity we have of effectually relieving; for when the series of changes, which we denominate softening, has once taken place, we know of no means whereby the nervous structure may be restored to its integrity.

I am far, however, from wishing to extend the conclusions I draw from my own case to *all* cases, or to say that cervical paraplegia *may* not have a peripheral origin. I assert only that such is not invariably, nor, I believe, very frequently the case, and that, therefore, it is not a correct statement of its pathology to say that it is a disease primarily of the muscular tissue. Of the five cases occurring under his own observation, which Dr. Gull has related in his *Gulstonian Lectures*, three had symptoms indicative, more or less, of disease of the nervous centres. In the first, there was, during the whole course of the case, pain in the head, which was stated to have been peculiar, and to have originated apparently in the upper part of the neck. In the second, there was weakness, though transitory, of the legs, and an equally transitory numbness in one side of the face. In the fourth, there was uneasiness low down in the neck, on flexion or rotation of the head, and the patient was improving on a treatment, directed under the idea of disease of the spine, when he got an attack of rheumatic fever, after which his paralysis was so greatly relieved, that he was able to return to a very laborious occupation.

77, Sloane Street, October 1850.

ON THE EXISTING STATE OF OUR KNOWLEDGE OF VACCINATION AND REVACCINATION, AS PREVENTIVE OF SMALL-POX.

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THE preventive influence of Vaccination, questioned even at the period of its discovery, and especially from the year 1804 onwards, has acquired additional claims to the most careful and dispassionate consideration, from the increased prevalence of epidemic Small-pox of late years. A re-examination of the subject, therefore, would appear peculiarly appropriate, not only with the object of attempting to satisfy the natural anxiety of the public, but also with the hope of contributing to a greater unanimity of professional opinion on the questions—*How far does the artificial Cow-pock actually secure the constitution against a subsequent attack of casual Small-pox?* and, *Whether it is possible, by any means, to confer an additional degree of security?*

To the examination of a subject, manifestly of the greatest practical importance, not only intrinsically, but as occurring to us almost daily in our professional life, I shall therefore address myself with all the deliberate attention and impartiality which the difficulty of the investigation properly demands.

1. CASUAL SMALL-POX—ITS HORRORS—PROPORTIONAL ATTACKS, AND MORTALITY—LEADING TO THE PRACTICE OF VARIOLOUS INOCULATION. HISTORY OF INOCULATION—ITS PHENOMENA, AND EFFECTS IN ABATING THE RAVAGES OF SMALL-POX—REPLACED BY VACCINATION, OR THE ARTIFICIAL PRODUCTION OF COW-POCK.

Casual Small-pox. It has been disputed by writers of the highest authority in medicine, whether Small-pox was known to the ancients; the affirmative of the question having been maintained, by Rhazes, Salmasius, Willan, Baron, and others; whilst, on the opposite side, are found the names of Friend, Mead, and Good,—no mean authorities on such a subject. But there is too little of practical utility in the question, to induce us to take part in its discussion. Rhazes, who wrote in the ninth century, appears to have been the first to treat distinctly of the disease, although the occurrence of both Small-pox and measles as early as the year 572 (the era of the birth of Mohammed), is expressly mentioned in an Arabic manuscript,¹ preserved in the University of Leyden; but, whether that document be certainly genuine, or not, at all events, from the allusions made by Rhazes to the opinions of Ahron, and others of his predecessors, we cannot err in dating the appearance of Small-pox anterior to the period of the Hegira, as it frequently broke out, during the seventh century, in the wild, fanatic legions led forth by the great prophet of Mecca, to propagate the doctrines of the Koran by the edge of the sword. Thenceforward, at all events, Small-pox has proved one of the most destructive of human maladies, whether appearing in its sporadic form, or in those terrible epidemic irruptions, in which it has smitten its victims as fatally, as numerous, and scarce

¹ Hamilton's History of Medicine, vol. i.

less suddenly, than the destroying angel who passed of old over the doomed hosts of the Assyrian camp.

A few illustrations of what we have asserted will suffice. When introduced into Mexico, not long after the discoveries of Columbus, this fearful pestilence cut off, within a brief period, not less than three millions of the unfortunate natives; and it is well known, that whole tribes of the Red men of Western America, who, from this and other causes, are fast disappearing from the footfalls of their fathers, have been swept away by the same malady. In England, 40,000 individuals are said to have perished annually; and two millions, on one occasion, in Russia in a single year. Hægarth attributed to this cause one half of all the deaths taking place in children under ten years of age; and, of all persons attacked by Small-pox, one-fourth, or at least one-fifth, are believed to perish; whilst, according to the experience of Dr. George Gregory, the mortality is even greater than this. At the Small-pox Hospital, for the last half century, the fatal cases have ranged from eighteen to forty-one in the hundred; averaging, on the whole, about thirty per cent.¹ Nor is this all, for one attack of the malady, even in its severest form, does not invariably protect the survivor from a second, as is clearly shown by ample experience. The extent of this consecutive liability, however, has been variously estimated by different authorities: thus, the proportion of secondary attacks of Small-pox, to the primary, is computed, by La Condamine as 1 in 50,000; Heberden, as 1 in 10,000; other authorities, as 1 in 8,000; Eichorn, as 1 in 250; and Mohl, in his description of the Copenhagen epidemic, asserts that every sixth person who suffered from the disease, had it for the second time.

The calculations just quoted are evidently too widely discrepant to do more than establish, generally, the fact, that the disease may occur a second time; and, on some occasions, as in the Danish physician's experience, in a high proportion; but they shew conclusively, at the same time, that we have no data for determining any law as to the frequency of the occurrence. The general proposition, however, of the liability to a second attack, was known as early as the times of Rhazes and Avicenna; and probably there are few practitioners who are not, from their own experience, cognizant of it; but, at all events, Baron, in his life of Jenner, alludes to no less than one hundred and thirty different writers, who have given examples of this occurrence. Were it necessary to strengthen the evidence on this point, we might refer to the reports of Heim and the Wirtemberg physicians, showing, that of 297 persons who bore evident marks of the Small-pox, Vaccination failed in only 126 cases, succeeding perfectly in 95, and affecting the remaining 76 in a modified form. Indeed, the entire statistics of the authorities referred to, show that more than a half of all the individuals operated on, after Small-pox so severe as to leave their persons marked by scars, had again become liable to the disease. In coming to this conclusion, they assume, perhaps correctly, that susceptibility of the contagion of Cow-pock indicates an equal liability to that of Small-pox: this, however, is a debateable question, to which we shall return hereafter. But not only is the possibility of the recurrence of Small-pox, in the

¹ *Cyclopædia of Practical Medicine*. Art. "Small-pox", p. 742.

same individual perfectly established, but equally so the fact, that the secondary attack may be extremely severe, and even fatal. A well-known instance of this unfortunate result occurred in the person of Louis XV of France; and at least one fatal case has happened within our own observation. The experience of Macintosh supplied twelve instances of secondary attacks; and he adds, "all my cases of secondary Small-pox, with the exception of two, have been remarkably severe, whereas, I have not seen a severe case after Vaccination." And when to the fearful mortality just described, are added not only the virulently contagious nature of the disease, but the long catalogue of melancholy results which follow in its train, including tubercular consumption, various forms of scrofula, hideous disfiguration of the countenance, and blindness, it may readily be believed that any feasible plan of mitigating its horrors was calculated to excite intense interest; and this plan was found in the practice of variolous inoculation.

Variolous Inoculation. The artificial production of Small-pox by Inoculation, is a practice alleged to have existed amongst the Chinese and the inhabitants of Hindostan from remote ages, and to have been also long known to the people of various countries of Europe; but its power of ameliorating the virulence of the casual disease was first formally announced in a communication made to the Royal Society of Edinburgh, early in the eighteenth century. About the same period, the observations of Pylarini, Venetian consul at Smyrna, and a notice of the letter of Dr. Timoni, on Inoculation, written from Constantinople, were published in the *Philosophical Transactions*. Further attention was drawn to the subject by the writings of Mr. Kennedy, but without any practical effect, until the pen and personal influence of Lady Mary Wortley Montague seriously attracted the notice of the public. The practice of Inoculation, thereafter, gradually made its way in England, although violently opposed by many eminent members of the medical profession, and denounced from the pulpit as the offspring of atheism, and a diabolical invention of Satan. Subsequently, however, to the year 1730, it fell into almost total disuse in these kingdoms; and was actually prohibited by law in France. In 1754, a declaration was made by the London College of Physicians in favour of the practice, but without any decided effect, until its successful results in the hands of the Brothers Sutton rendered it generally popular for some time. In 1746, the Small-pox and Inoculation Hospital of London was founded, for the purpose of extending the benefits of the discovery to the poor; and the results, in that establishment, were favourable. In the following year, Inoculation was powerfully supported by the influential pen of Mead;¹ and Baron Dimsdale² followed the Suttons with much success. His plan of operating, which has not been improved on, was generally adopted for the next twenty years, and with increasing popularity, until Jenner, in 1798, announced to the world his great discovery of Vaccination. Since that period, the general practice of Variolous Inoculation has fallen into disuse.

With reference to the individual, the advantage of Inoculation, however, was fully established. It abridged, by several days, the incubative stage of the disease: it lessened the quantity of the eruption; and so

¹ De Variolis et Morbillis.

² Present Method of Inoculation for Small-pox.

greatly abated the malignancy of the symptoms, that the deaths in the Inoculation Hospital only amounted to three in one thousand cases, whilst the mortality from the casual disease at that time, and even now, according to Gregory, amounted to *three* in every ten persons attacked by the malady. The following phenomena, usually occurring after Variolous Inoculation, may be contrasted with the unameliorated horrors of the casual disease.

Inoculated Small-pox. About the third or fourth day, a slight redness, and a trifling degree of induration, perceptible to the finger, may be observed at the point of operation. On the fifth day the redness is more vivid; and on the sixth, the cuticle is generally elevated by the effusion of serum, a central depression being observable at the same time. On the seventh day, irritation of the superficial lymphatic vessels occurs, the arm in the vicinity of the puncture becomes painful, and the general symptoms of fever are developed. The eruption, whether local or general, commences to decline from the twelfth to the fifteenth day, after the date of the operation; the pustule being replaced by a scab, which falls off in a week or ten days more, leaving behind it an indelible cicatrix.

The question then arises, why a practice, so manifestly beneficial, came to be almost completely abandoned, at all events, by the medical profession? Several circumstances contributed to this result. It was found, on examination, that the malady produced by Inoculation, although mild in the majority of cases, was not invariably so; for many persons, after the operation, passed through a very severe form of Small-pox; and no inconsiderable number died of the disease thus artificially produced. Like casual Small-pox also, the engrafted malady was found to excite in the system various consecutive disorders, and, especially, to arouse into activity any lurking scrofulous taint. These were serious risks for the practitioner to incur by his own act; and as it was impossible to foresee, in any given case, what might happen, the objection to the production of a disease artificially, which in the common course of events might, probably, never occur at all, became very strong; for, even at the worst, it appeared that a vast majority of the people, without any precautions whatever, escaped altogether an attack of casual Small-pox. Another objection, and, as regards the public, a very weighty one, was the unquestionable tendency of Inoculation, without careful seclusion and proper precautions, to promote the diffusion of contagion. It may be true, as Adams,¹ Watkinson, and Schwenke, have attempted to shew, that the danger has been over-rated; but the sources of infection were so much multiplied by the practice, as Dr. Gregory justly remarks, that the casual Small-pox, which formerly visited country places at long and uncertain intervals, was now to be met with in all parts, at all times; 45,000 persons being annually cut off by its virulence.²

Experience also taught, that Inoculation, however confidently asserted to prevent a second attack of the malady, had, by no means, invariably this effect; on the contrary, many writers affirm that secondary attacks

¹ Inquiry into the Laws, etc., of Epidemic Diseases.

² Cyclopædia of Practical Medicine. Article, "Small-pox."

were more frequent after the artificial, than the casual disease. This last statement has been controverted by the high authority of Dimsdale; but, at all events, as has been more recently shewn by Baron, death occurred in the proportion of one in every fifty of the inoculated.

Inoculation was prohibited, by Royal authority, in France in 1763; but the death-blow to the practice was not given, as already intimated, until the promulgation of Jenner's discovery, about a quarter of a century later.

II. VACCINATION, HISTORY OF—SYMPTOMS AND OBJECTS—ARGUMENTS IN FAVOUR OF ITS PROTECTIVE INFLUENCE—OBJECTIONS—HOW FAR, AND IN WHAT MANNER, IT HAS BEEN SHEWN TO FAIL.

History. After a lengthened investigation of the subject, Jenner first announced, in 1798, in his well-known *Enquiry into the Causes and Effects of the Variolæ Vaccinæ*, that the Cow-pock, having passed through the human system, after being transferred from the teats or udder of the cow, by the process of Inoculation, ever after guards individuals, so operated on, from the contagion of casual Small-pox; and that, by the universal adoption of Vaccination, this dreadful disease might not only be divested of its all terrors, but be finally extinguished from the list of human maladies. Residing at Berkeley, in Gloucestershire, in one of the great dairy districts of England, his attention was first turned to the subject by a knowledge of the popular belief, which he found prevalent, that Cow-pock, when casually transferred to the hands of the milkers, subsequently protected all persons so affected from an attack of Small-pox. And to the establishment of this doctrine, by accumulated observations and arguments, as tending to confer incalculable benefits on the human race, he devoted a great part of the remainder of his long, honourable, and useful life. Jenner did not, however, escape the common fate of great discoverers; for although the majority of the medical profession eagerly and gratefully adopted his views, yet, by a few, the value of his announcement was depreciated, his motives questioned, and even his character maligned. Time, however, has done justice alike to him and his traducers; and even if it could be shewn, unequivocally, that his views were partially erroneous, enough would still remain to entitle him to the undying gratitude of the human race, whilst his ardent desire for the good of his kind, and his patient and Christian bearing under the detraction of his enemies, as well as the untiring industry, the deep sagacity, and profound reasoning, which he displayed in the defence of what he conceived to be true, will for all time to come confer celebrity on his name. “Τό ὄνομα ὀνποτ’ ὀλώλει.”

In 1799, Vaccination was introduced into America by Dr. Waterhouse; and, in the same year, a testimonial of confidence in the discovery of Jenner was signed by a large number of the most eminent physicians and surgeons of London, including the distinguished names of Cline, Cooper, Baillie, and Abernethy.

In 1800, the practice was adopted in France. Amongst the warmest of its advocates on the Continent, we may enumerate Sacco of Milan, and De Carro of Vienna, by the exertions of the latter of whom, Vaccination reached Bombay, and was thence diffused all over India. As early as 1801, six thousand persons had been successfully vaccinated in Great Britain alone. In the year 1802, a remuneration of £10,000

was voted to Jenner by the British parliament, and a further sum of £20,000 in 1807, sixteen years before his death, which took place in 1823, when he had reached the advanced age of seventy-four years.

In 1833, a Committee of the House of Commons made a report on the Vaccine Board, and on the practice of Vaccination generally, which contained the latest information on the subject, up to the period in which it was drawn up. More recently, the question has been ably discussed in Dr. Baron's *Life of Jenner*, and in the Report of the Committee, appointed by the British Association, to investigate the subject in 1839. Within the last few years, a short Act of Parliament was passed, commonly called the Vaccination Act, with the praiseworthy object of promoting the more general diffusion of Cow-pock, by providing remuneration, to be made out of the poor-rates, for each successful operation. In Norway and some of the other continental kingdoms, Vaccine Inoculation is enjoined by law, and the practice is more or less prevalent throughout every country in the world.

Effects. The doctrines of Jenner have been maintained, since his death up to the present hour, by many distinguished writers, not the least celebrated of whom is Dr. Baron, his able biographer, who was principally concerned in drawing up the Report already alluded to, as emanating from the British Association. The views there advocated will briefly appear, from the following abstract of the petition, founded on the report, and directed to be presented to Parliament: "Your petitioners have learned by the concurrent testimony of a very large proportion of their members, that Cow-Small-Pox, if duly and carefully communicated, has an enduring influence in protecting the constitution; they admit that this protection is not in all cases complete, but they have unquestionable proof of its being capable, if generally and properly employed, of mitigating, controlling, and they might almost say of extinguishing, Small-Pox in any district."¹

Many observers, however, both on the Continent and these countries, —and the number has been increasing for some years,—only partially subscribe to the doctrine of Jenner, contending that Vaccination, although it may impart the protective influence to an unascertained proportion of those submitted to the operation, by no means does so to all; and that even where imparted, it is liable to wear out, and leave the system again susceptible of the contagion of casual Small-Pox. A few maintain that the Cow-pock, in its most perfect form, confers neither permanent nor temporary protection. In addition to the grand object of destroying the liability to Small-Pox, or at least mitigating its severity by Vaccination, the practice has been advocated, by ascribing to it several subsidiary advantages, the chief of which is the comparative safety of the operation as compared with Variolous Inoculation, both to the individual and the community, from the tendency of the latter to multiply the sources of contagion, and consequently to extend the ravages of the disease.

Minor benefits derivable from the artificial production of Cow-pock, are alleged to be, an occasional tendency to ameliorate the process of dentition, and occasionally to effect a cure of various cutaneous dis-

See the Report; also, *British and Foreign Medical Review*, No. xvi, p. 613.

eases. These collateral benefits of Vaccination we shall dispose of first, and thus leave the space clear, for the discussion of the grand question of protective influence.

It is asserted by Heim that the process of dentition is, in many cases, accelerated by the development of the Cow-pock, and Capuron admits, that it is, at least, not rendered more troublesome. Jenner, and several other writers, bear testimony to various chronic affections of the skin having been rendered milder, and even actually removed by Vaccination. Amongst the diseases specified, are scabies, herpes, porrigo, and impetigo; and Valentin adds ophthalmia, and scrofula; nor does there seem to be any valid objection against trying the effects of Vaccination in such cases, provided we do not allow the lymph, resulting from the operation, to be made use of for the transmission of the Cow-pock to others. We do not, however, advise our readers to hope for any very striking success from this practice, as it will be found, in the majority of instances, as unsuccessful in arresting the progress of any severe cutaneous diseases, as it turned out, in the hands of Dr. McCormac, when experimenting on its effects, in a case of hooping-cough.¹

Other advantages possessed by Vaccination are the absence of that tendency to produce, in any case, a number of confluent pustules with their consequent deformity, and to rouse into activity, the germs of scrofula and other constitutional diseases, which is well known to mark the course of Small-pox, whether arising casually, or dependent on inoculation. We are aware that it is alleged, that even Vaccination may produce a deterioration of the blood, and give rise, also, to a variety of cutaneous affections. This alleged deterioration of the blood, however, is a mere hypothesis, and, as such, deserving of no further remark. That boils, pustules, certain cutaneous eruptions, and smart inflammation, may now and then follow the Cow-pock, although rarely, where the health of the patient is in a satisfactory state, we are assured from personal experience; but even here a comparison of the operation, with that for variolous inoculation, is in favour of the former, for such diseases are much more frequently observed after Small-pox, and, as pertinently observed by the late lamented Professor Burns, whose memory is deservedly held in the highest respect, no new cutaneous affection has followed the introduction of Vaccination. But, even at worst, when compared with the great advantages of Vaccination, this objection would scarcely be worthy of notice, except with the view of correcting a vulgar error, viz., that the cutaneous affections alluded to, depend on impurity of the virus employed. Manifestly, in the majority of cases, this is not so—but the result is dependent on the state of the constitution at the time of the operation; for the same lymph will produce the effects in question in one child, and not in another, as I have, over and over again, had the opportunity of observing.

The tendency of Vaccination to diminish the prevalence of Small-pox, by rendering less numerous the sources of infection, is so self-evident, that we need not dilate on it here, although, as regards the community, it is a matter of very great importance.

¹ Methodus Medendi.

And, even in point of safety, the operation for Cow-pock has an immense advantage over variolous inoculation, for, to say nothing of the comparative mildness of the symptoms of the former, it is not to be overlooked, that a considerable mortality arose from the artificial Small-pox, even after the most careful preliminary preparation for the operation. The average number of deaths from this cause, at the Inoculation Hospital, is stated to have been three in one thousand cases, and the mortality consequent on Vaccination is certainly very much less than this, although little or no medical treatment, either preparatory, or during the progress of the disease, is either practised, or, indeed, considered necessary. Many practitioners, of considerable experience in this branch of practice, have never seen a single case of Cow-pock terminate fatally in the human subject; still, the possibility of such an occurrence has been sufficiently determined. In Germany, according to Heim, of 208,322 children submitted to the operation, 70 died; and at Baden, 79 deaths occurred out of 98,198 cases. The proportion of one fatal case therefore in rather more than 2,000 individuals is not large, even if it could be unequivocally shown, that all the recorded deaths were necessarily dependent on this cause, and the results might therefore be advantageously contrasted with the mortality arising from variolous inoculation. But in these kingdoms, we are able to infer with certainty, after extended inquiry, that the fatality is infinitely less; and in my own personal experience, extending to a thousand cases in one year, I have never seen the operation terminating in death, even in a single case, and Dr. Baron has only seen one. Nothing further need therefore be advanced as to the superiority of Vaccination in point of safety.

Protective Influence of Vaccination. The great practical question—*Whether, and how far, does Vaccination protect from a Subsequent Attack of Casual Small-pox?* now remains for discussion. And first, with reference to the groundless assumption, that Vaccination affords no protection whatever, we believe it to be so directly contravened by the most conclusive testimony, and by well-established facts, that no other reply seems necessary, but to adopt the language of Capuron—“Experience and observation constitute an answer to their foolish and absurd declamations.” The evidence in favour of the protective and modifying influence of Vaccination may be arranged as follows.

a. Popular experience, as to the immunity enjoyed by those who have casually contracted Cow-pock from the cow, horse, or camel.

The discovery of Jenner, as before stated, arose out of the popular belief, prevalent in the dairy counties of England, that the casual transfer of a peculiar form of disease from the udder of the cow to the hands of the persons engaged in milking, defended such persons, ever after, from the liability to Small-pox; and it was only after a long and patient investigation of this point, that that eminently sagacious physician came to the conclusion, that the popular belief was founded in truth. His researches have, therefore, tended to lighten, greatly, the labours of subsequent investigators, by clearly pointing out the precise characters of the pock, which alone can impart the desired impunity, and which it is therefore necessary carefully to discriminate from a variety of diseases having a general resemblance to the genuine malady, but conferring no exemption from a subsequent attack of Small-pox. Jenner,

however, erred in supposing the casual variolæ vaccinæ to be, invariably, a purely local disease, whereas it is frequently a constitutional febrile affection, generally mild, and accompanied by an eruption; but occasionally severe, and even fatal. Thus, at Moorshedabad, the pustules appeared all over the body, about the fifth or sixth day after the animal became indisposed, with fever and much distress, and went on to ulceration, the hair falling off wherever a pustule had run its course. The mouth and fauces (which, being one mass of ulceration, impeding mastication), were the principal seats of the disease, which proved fatal, apparently from inanition, in the proportion of from fifteen to twenty per cent.

According to Ceely,—to whose minute and correct history of the symptoms, collated, however, with various other accounts, we are principally indebted for the following description,—the casual Cow-pock appears most generally in the spring, and in a sporadic form. The disease is, however, occasionally epizootic; but Mr. Ceely has not been able to trace it to the equine vesicle, and he adds, that in England, fever is rarely observed. The first perceptible symptoms are heat, tenderness and induration of the udder, followed, about the fifth day after exposure, by small papulæ, affecting also the teats. In cows with white skins, circumscribed indurations appear about the sixth and seventh days, of a reddish colour, as large as a pea, and circular, ovoid, or lozenge-shaped, with a central depression, in which is visible a small dirty yellowish-white discoloration, surrounding a still darker dot or line. The indurations are often interspersed with minute red papulæ, of a darker colour, rather acuminated, and frequently abraded at the summits. Some of the tumours have a slender amber-coloured, yellowish-brown, or black central crust, and are less prominent than those without the crusts. On the eighth and ninth days, the central depression, frequently of a blueish tint, becomes more apparent, as well as the elevation of the margin, which is solid, uniform, tense, and shining, of a glistening pearly, or silvery hue. An areola of a pale rose, or light damask-colour, a line or two in width, is frequently apparent round the base. In others, the central crust has increased, and is yellow, brown, or black; some appear a little pustular in their centres. A few small conoidal vesicles, some of them with a slight depression on the apex, appear to have subsequently arisen on the teats, but in general, the majority of the tumours on these parts are more or less abraded, and lymph is seen exuding from their centres, the cuticle being loose, or partly detached, whilst brown and black incrustations, and other alterations from the natural characteristic appearance, are manifest. About the tenth and eleventh days, the disease usually reaches its acme, when the tumours are often eight or ten lines in diameter, the centres and central edges of the intumescent margin are of a deep blue or slate-colour, and the areola, under which the integuments are deeply indurated, generally of a pale rose-colour, is seldom more than four or five lines in extent. The lymph, now abundant, raises the cuticle, and forms a globular or conoidal vesicle, or freely flows out from its rupture. From this period the induration subsides, and the incrustation and desiccation proceed, until the crusts spontaneously separate, from the twentieth to the twenty-third days, leaving shallow, smooth, oval, or circular

cicatrices, of a pale rose, white, or yellow colour. When the process is disturbed, we may observe on the teats, large black, solid crusts, often more than an inch or two in length, or they appear abraded, ulcerated, and bleeding.¹

It has been affirmed by Reckleben and Thar in Germany, as well as by some observers in this country, that milch-cows are alone subject to Cow-pock, but Heim has shewn that this is not consonant with fact. The truth is, that milch-cows, from causes that must be obvious, are certainly more liable to the disease than young cattle, which are less exposed to inoculation by the hands of the milker; but the latter are by no means entirely exempt.

The lymph from the genuine vaccine vesicle just described, when accidentally transferred to any abraded surface on the milker's hand, and absorbed, reproduces the disease usually termed casual Cow-pock in man, which is marked by an eruption of inflamed spots, the tendency of which is to terminate in suppuration. The pustules are bluish, and circular, with elevated edges; and the consecutive phenomena include swellings in the axilla, fever, headache, vomiting, and, occasionally, delirium. These symptoms decline in three or four days; but the sores are painful, and very frequently heal with difficulty.

Bastard forms of Cow-pock, on the hands of the milkers, arising from spurious varieties of the disease in the cow, are of frequent occurrence, and, from their incapability of imparting any protection to the system, have proved a frequent source of error. The most usual forms of the spurious disease are described in another part of this paper; by contrasting which, with the above minute description of the genuine disease, they may be readily distinguished from each other.

But, rigidly speaking, this popular belief in the general immunity, conferred by casual Cow-pock, cannot be admitted as a conclusive argument, until it shall have been determined, by a sufficient body of statistical information, to be certainly true. This, hitherto, in our opinion, is by no means the case; but, at the same time, the proposition has been rendered so probable, by the investigations of Jenner, and others since his time, as to entitle it justly to the place of a strong corroborative argument, in favour of the efficacy of Vaccination. It is not, however, to be looked for, as a result of further examination of the subject, that the protection, which Cow-pock is capable of conferring, shall be invariably present in all cases. This was an error into which Jenner fell; for the immunity, arising even from casual and inoculated Small-pox, is liable to numerous exceptions; and no other result can reasonably be expected in the case of Cow-pock.

Having thus portrayed the casual disease, as it displays itself, both in the cow, and in man, we shall now minutely describe the symptoms, which follow the transference of genuine lymph to the human subject. This is a part of the subject of great importance; because all our reasoning, as to the protective influence, has reference to the genuine character of the disease; and the truest test of this is the complete and regular process of the vesicle, with its attendant symptoms, throughout its entire course.

¹ British and Foreign Medical and Surgical Review, No. xx, p. 465. •

b. Symptoms of inoculated Cow-pock. After the insertion of the genuine virus, the puncture ceases to be apparent for a few days, which may be termed the period of abeyance; but it has been observed by Gregory to assume a vesicular form, under the microscope, within eight-and-forty hours. On the third, or fourth day, an inflamed speck becomes visible to the naked eye, which gradually increases in size, and forms a small, slightly prominent tumour, presenting in its centre a dark point, formed by the commencing secretion of the lymph. This point gradually increases in size, and becomes a small transparent vesicle, either of a dull white colour, something like a pearl, or, occasionally, yellowish, with a circular, or sometimes an oval base, especially if the operation has been performed with a longitudinal scratch. The margin is well defined, being rounded, turgid, red, and shining; the centre is umbilicated, or dips instead of being polarized; and this form remains until the eighth, or ninth day, when the vesicle sometimes becomes more elevated in the centre than at the circumference. Frequently there is scarcely any perceptible fever; but more usually, about the eighth day, a degree of constitutional disturbance takes place, which is indicated by slight headache, and lassitude, and possibly by shivering, loss of appetite, heat of skin, increase of pulse, disordered bowels, pain of the arm-pit, and occasional enlargement of the axillary glands. These febrile symptoms may be present for a day, or two, but they almost invariably then subside, leaving no trace behind. About the eighth day, a little sooner or later, the vesicle is surrounded with a circular, inflamed halo, or erythematous areola, marked by intense itching, redness, and slight swelling of the surrounding membrane, and varying, in diameter, from one to two inches, in different cases. The areola is, occasionally, the site of a number of small vesicles. This local inflammation is the pathognomonic proof of the system being affected with the disease. About the ninth, or tenth day, the vesicle acquires its greatest magnitude, and is equal in diameter to the third or fourth part of an inch, and about the size of a split pea. About the eleventh day, all the symptoms decline; the hue of the areola becomes gradually fainter, and, in a day or two, as it begins to fade imperceptibly away, it leaves two or three concentric rings, of a bluish light grey. It is scarcely distinguishable on the thirteenth day after the operation; at which time the vesicle hardens into a dark brown, circular scab; the fluid for two or three days previously having begun to dry up, first at the centre, and to assume something of a purulent consistence. This, if not rubbed off, or interfered with, falls off towards the twentieth to twenty-fourth day, leaving the skin perfectly whole, but marked by a permanent cicatrix, about the third, or half of an inch in diameter, which is marked by a number of pits, corresponding to the cells of which the vesicle had been composed. Each puncture produces but a single, multilocular vesicle, the little cells of which communicate with each other, and secrete a perfectly transparent, colourless lymph, not however, as stated by Good, during the entire progress of the disease. For, although Cow-pock is considered rather a vesicular, than a pustular malady, the vesicle becomes turbid towards the close, and actually secretes genuine pus. Such is the usual progress of the genuine Cow-pock. It may, however, present various deviations from the regular

course, which may be looked on as immaterial, and which are, therefore, to be carefully distinguished from such aberrations as would interfere with the due impregnation of the system. In the former class we may enumerate the following peculiarities: more or less violent inflammation, sometimes even extending to the trunk of the body, is occasionally observed, terminating in a profusely discharging ulcer, instead of the characteristic scab; but this, though requiring local applications, and at times even general remedies, of a cooling nature, does not, in the opinion of Gregory, militate against the protecting influence of the vaccine operation: my own experience is to the same effect. The same physician describes a papular eruption, appearing about the tenth day, occasionally spreading from the extremities to the trunk, and most usually occurring where numerous vesicles have been raised on the arm, indicating, as he alleges, a full effect upon the system. The lichen, here described, is by no means unfrequent, but it may follow spurious, as well as genuine Vaccination, and cannot therefore be looked on as any certain test of the efficacy of the operation.

The occurrence of vesicles, except on the points punctured, is very rare; but if present, they may be considered as a proof of the energetic operation of the virus on the system. In certain cases, these supernumerary vesicles have been attributed, by Cazenave and Schedel, to transference of the matter by the nails, after scratching; but this appears to be a very questionable cause, and, at any rate, the effects may occur quite independently of it.

The phenomena of Vaccination in the adult are the same as in the child, with a few unimportant variations, which have been correctly described by Gregory. Thus the vesicles are thinner, and consequently, more easily ruptured, the lymph generally presents a yellowish tinge, and the areola is more extensive, the axillary glands more frequently become swollen, and the consecutive fever is greater, with less tendency to secondary lichen, than in children. But such slight anomalies neither interfere with the protective power, nor the contagious properties of the lymph, although, for reasons which will appear hereafter, we should avoid selecting it for transmission of the disease.

c. The Identity of Cow-pock and Small-pox an argument in favour of the protective influence of Vaccination.

It was maintained by Jenner, on theoretical grounds, that the diseases in question were identical, the Small-pox being merely a malignant variety of the Cow-pock; but it is of importance to show, that the correctness of his opinion, in part at least, has been established by evidence, both sufficient in point of amount, and satisfactorily attested, to gain the assent of all those who are not unreasonably and pertinaciously sceptical. In asserting the identity of the variolæ vaccinae and Small-pox, Jenner has found supporters in Wedekind, Henry,¹ Baron, and many others. But no actual experiment in favour of their opinion, however rational, was adducible, until Dr. Sonderland, of Bremen, communicated the disease to a cow, by enveloping her in a woollen bed-cover removed from a patient, who had died of Small-pox;² and fine vaccine lymph was procured in Egypt in the same way. As the ex-

On the Laws of Contagion.

² Petition of Provincial Medical Association.

periment, however, was not followed by like results in the hands of Gregory, Numann, and Macpherson, the statement of Dr. Sonderland became unjustly discredited, until Gassner, Fomin, and Dr. Basil Thiele, of Kasan, succeeded in producing the genuine vaccine disease in the cow, by inoculation with Small-pox matter. Finally, the question must be looked on as settled by the unexceptionable experiments of Mr. Ceely, of Aylesbury;¹ for, the virus of human Small-pox having been communicated by inoculation to the cow, a poek was the result, resembling in all essential particulars the Cow-poek, and which, like the original vaccine disease, afforded a lymph with which some hundreds of persons have been successfully vaccinated, and the efficiency of which has been subsequently tested, both by inoculation of the persons vaccinated, and by their exposure to the contagion of the casual disease. Nor is there anything very remarkable in Retro-vaccination, or the artificial communication of Small-pox to the cow; for M. Viborg had previously succeed in producing the disease in dogs, apes, and swine, in the same manner.² In the dog, the vesicle, although evidently smaller, runs the same course as in man. In Lombardy, and in Persia, it has been observed in the sheep as well as the cow, and also in South America by Humboldt and others.³ The camel too, is susceptible of the disease, as we learn from the communication of Dr. Winchester, in the *Indian Journal of Medicine*, quoted in the nineteenth number of the *British and Foreign Medical and Surgical Review*.

It appears that, in the province of Lus, the camel milkers are subject to a malady termed "*Photo-Shootur*," the Small-pox of the camel, that complaint being designated by the term *Photo*, in the district in question. This is a pustular disease, affecting the hands and arms of the milkers, which is derived from a similar affection on the udder of the camel, closely resembling that on the udder of the cow. No one is ever known to die from this disease; and it is remarked by the natives that those who have been subject to this camel-poek are invariably free from Small-pox, which occasionally prevails as an endemic in that district. It is generally known, that Jenner attributed the sole origin of the disease in the cow, to a complaint affecting the heels of horses, which he erroneously supposed to be the grease, but which has subsequently been ascertained to be a peculiar vesicular disorder affecting not only the heels, but the limbs and body of that animal, and capable of communicating the Cow-poek either to the cow, or directly to man, as fully shown by Loy, Sacco, and De Carro. Of this equine form of the disease, or *pferdemaucke*, Professor Hering adduces two instances exhibiting all the characters of perfect identity with the vaccine malady. But this is not the only source of the complaint affecting the cow, for it is well ascertained, as stated by Griva, that it has been observed to occur in that animal spontaneously in Switzerland, the north of Italy, Rome, Germany, Wirtemberg, Holland, France, and Ireland. Dr. M'Cormac suggests, that the disorder in the horse may have been

¹ See Mr. Ceely's Experiments; *British and Foreign Med. Rev.*, No. xvi, p. 614, et seq., and vol. xiii, p. 781; also, *Med.-Chir. Rev.*, Jan. 1834.

² *Med. and Phys. Journ.*, Sep. 1802.

³ *Baron's Life of Jenner*, vol. i, p. 239.

derived from the cow, but it would be extremely difficult, if not impossible, to determine whether the disease originated in man, or in the horse, or the cow; and, at any rate, it is sufficient to know the fact, that it may now occur independently in each, and that it is mutually communicable from the one to the other. In giving an impartial view of the subject, however, we should not omit to state the arguments which have been advanced against the identity of the diseases we have been considering, although such objections must now go for nothing, since the establishment of the point at issue by authentic experiments. The first of the objections in question to which we shall allude, is the comparative mildness of the vaccine disease; but the force of this argument, if it have any force, is obviated by knowing that the variolæ vaccinæ have prevailed, as in the year 1825, in as severe and fatal a form, as the Small-pox in man. It must be admitted, however,—indeed it is on this that the value of Jenner's discovery entirely depends,—that, in general, the character of the malady has been rendered infinitely milder, by its transmission through the cow. Another point of difference well established between the two forms of the disease is, the atmospheric transmissibility of the contagion arising either from the casual or inoculated Small-pox, whereas it is not known that the Cow-pock can be conveyed, except by direct contact. It has also been asserted, that the vesicles arising from the vaccine lymph are invariably confined to the points of puncture; and, as a general rule, this must be admitted to be true. But, from whatever cause arising, this is not invariably the case. Thus it sometimes occurs, that Vaccination is performed on individuals exposed to the variolous contagion, and, in such cases, an eruption, more or less abundant, may appear on various parts of the body. Cazenave and Schedel explain this, by saying that the eruption is only Small-pox modified by the process of Vaccination. But it has been further alleged by some physicians, that they have employed the lymph taken from this supposed Cow-pock eruption, and produced therewith genuine vaccine vesicles; in commenting on which, the authors in question observe, that in such cases, the operators have either grossly deceived themselves, or that the malady thus developed has truly the appearance of Cow-pock. Admitting this, they inquire, what becomes of the distinction between Cow-pock and Small-pox?¹

By the German physicians, a secondary eruption has been observed to accompany the vaccine process, presenting variously the appearance of a spotted rash, or a papuliform, vesicular, or even pustular disease; occurring usually between the eighth and fourteenth days, and remaining for two or three days, or even for a week. In some cases, the eruption assumes the appearance of chicken-pox; and in others, partially, or even entirely, resembles the genuine Cow-pock, and appears on various parts of the body.

Still, such appearances as these last are extremely rare, as I have not observed more than two, out of some thousand cases, in which the pock was not limited to the point of insertion. At one time, Dr. Geo. Gregory was directly opposed to the doctrine of the two varieties of pock being identical, inasmuch as no direct experiments had proved

¹ *Maladies de la Peau*, p. 79.

that Cow-pock can be communicated from man back to the cow;¹ but his statement is not in accordance with the experiments of M. Fiard.² At the same time, on the grounds that diseases which mutually produce each other, are clearly referable to the same source, he admitted the identity of Cow-pock and swine-pox; but, in the same train of argument, he denied that Cow-pock and Small-pox were identical, as the former never produced the latter in the human system; and Small-pox, however mild, never approaches to the character of Cow-pock. The inconsequential character of this mode of reasoning is apparent, but need not be insisted on, as Dr. Gregory has since admitted, that late observations have established the identity of the two diseases; and it is difficult to see how any other inference could be arrived at, after the conclusive experiments of Ceely, unless we are prepared to assert that one malady is capable of producing, by inoculation, another of a totally different nature.

This identity unquestionably supplies a powerful argument in favour of the efficacy of Vaccination; for those who believed that Small-pox and Cow-pock were essentially distinct diseases, might very justly object to the belief in the impunity alleged to be conferred by the latter, that there was no known instance of any one malady having the effect of destroying the liability to another. But the fact, as now established, both obviates the objection, and explains what was previously very mysterious; so much so, that a conviction of the non-identity of the two diseases would go far to shake, *in toto*, our belief in the real efficacy of Vaccination. Cow-pock, therefore, being determined to be essentially the same disease as Small-pox, which is confessedly one of that class of maladies in which a first attack destroys the liability to a second, the inference appears unavoidable, that Cow-pock should confer a like immunity; but the extent of that immunity can only be determined by the result of experience. Reasoning from analogy, and the observed effects in other diseases, we should be led to the conclusion, that the amount of the protection imparted by an attack of Small-pox, whether in its severe and casual, or in the mild and modified form of Cow-pock, would be the same; for we find that the constitution is equally protected from a second attack of scarlatina or measles, whether the primary disease may have been of the most malignant, or the mildest nature. But, as already stated, this is a question which can only be satisfactorily determined by extensive and accurate observation.

(To be continued.)

¹ Medical Gazette, vol. i, p. 781-2.

² La Lancette Franç., 1835. Report of M. Gérardin on Vaccine, 1833. British and Foreign Medical and Surgical Review, No. iii.

CASE OF ABSCESS OF THE PANCREAS.

By JAMES KILGOUR, M.D., Physician to the Ludlow Dispensary.

CASE. T., Esq., æt. 41, unmarried, of indolent habits, a large eater, fond of sweetmeats, addicted to masturbation, and one of whose sisters was carried off by phthisis, was subject, for some years, to periodical attacks of bilious dyspepsia, usually occurring in the autumn, and often attended by a white condition of the alvine evacuation, along with a liability to sickness and vomiting, more particularly in the morning. In September 1849, he suffered as usual; but, instead of getting well after a little dietetic discipline and laxative medicine, as had been the case in former years, his symptoms increased; and, when I first saw him, on the 21st of March last, he was emaciated, feeble, and dispirited. The symptoms under which he then laboured were sufficient to account for this condition: the most prominent were, frequent vomiting, without much nausea, great sense of distension in the stomach and bowels, which secreted much gas, almost total loss of appetite, and restlessness, with want of sleep at night. With reference to the vomiting, it usually took place in the morning, either before or after taking food; but, during the day, it generally occurred after food,—sometimes immediately, sometimes after the lapse of two or three hours. The matters rejected were the ingesta, mingled with, and followed by, a quantity of thin, ropy mucus, the whole being intensely acid. The amount discharged varied from a quart to an ounce, and seemed, in general, to depend upon the time during which the acid secretions had been permitted to accumulate. The act was attended with little effort; and, as has been already stated, was not accompanied by much, nor sometimes by any, nausea. The skin was dry and unperspiring, of a slightly yellow tinge, which was more pronounced in the sclerotic; the tongue white, but moist, though stated to have been red and dry previously; there was no thirst; the bowels were slow, but easily moved by medicine; the stools consistent, never fluid, unmixed with bile, and remarkably fetid; the urine was passed in proper quantity (sp. gr. 1.022), sometimes much loaded with lithates, and generally containing a good deal of urea and colouring matter. No bile could be detected in it; but the microscope showed it to contain fat.¹ The pulse was about 100, small; no pain whatever was complained of; even firm pressure over the abdomen failed to elicit signs of tenderness at any point,—the only inconvenience occasioned by its exercise, arising from its producing a tendency to vomit. Moreover, there was no unusual prominence of its walls, either general or partial; but percussion revealed much tympanitic resonance over the stomach and right side of the abdomen; while the left yielded a dull sound, from the lower border of the stomach to the ilium, and felt doughy, inelastic, and, towards the median line, knotty.

The region over which this absence of resonance prevailed, had no

¹ Dr. Bright mentions three cases in which fatty discharges from the bowels took place, and in which there was found, after death, a scirrhus condition of the Pancreas, and a fungous disorganisation of the duodenum.

sharply-defined limits, nor could the form of any tumour or substance beneath the abdominal walls be traced. There was neither pulsation nor fluctuation, to aid the diagnosis; and the general impression which an examination of the abdomen, at this time, conveyed, was, that some abnormal growth, occupying the greater portion of the left side of the abdomen, had pushed the intestines over to the right side, and the stomach up towards the thorax. The liver, whose secretion we have seen to be absent from the stools, though recognizable in the colour of the skin, could not be connected with this abnormal state. It appeared to be of ordinary bulk, not exceeding its natural limits in any direction, and bore pressure with the same impunity as other portions of the abdomen.

The case, as now described, proceeded, with slight and varying alterations in some of the symptoms, but with a decided downward tendency upon the whole, until about the middle of May, when its progress became accelerated by the occurrence of something like irregular inter-mittent. There were rigors, at uncertain intervals, of from one to three days, each being followed by a hot fit, and terminating by sweating; there was also a tendency to sweat at night. The vomiting, from which the patient had experienced occasional and temporary relief by the use of bismuth, now returned in all its intensity, and bade defiance to remedies; the wasting and debility, which heretofore had advanced with a gradual step, became painfully apparent from day to day; the appetite grew weaker; while the pulse rose in frequency (to 114), and sank in power. The bowels, no longer slow, acted of their own accord about twice daily; the quality of their contents remaining, as already described, devoid of bile, and horribly fetid, but never fluid. The tongue became red and clean, with numerous aphthæ on its back part and edges; the urine and saliva were natural in quantity and in quality; a little thirst was complained of, but no pain. It is to be remarked of the matters vomited now, that they were less sour than formerly, sometimes consisting of thin, glairy mucus, with something like yolk of egg intermixed; sometimes of a colourless fluid, neutral to test-paper, and slightly coagulable by heat. At the same time, the condition of the abdomen, as discoverable by palpation and percussion, became much changed; the dulness descending no lower than the umbilicus, and not rising higher than the ordinary situation of the lower border of the stomach, but rather stretching backward to the left flank. The cause of this dulness still remained undefinable as to form; and the abdomen, at that part, gave no other sensation to the fingers than what I have already described, namely, a doughy, inelastic feel. Pressure still failed to excite pain in any part of the abdomen; but some slight pain, or rather uneasiness, had been experienced in the left lumbar region.

The next epoch, which it is important to mark in this case, may be dated from the end of May. The rigors then ceased, and the abdomen returned to its usual condition, except at one point, about an inch above the umbilicus, and rather to the left of the mesian line, where pressure caused a feeling of soreness, or, as the patient expressed it, as if a boil were there. Over this spot, which was about two inches in diameter, the abdomen felt resistant, and India-rubber like. This apparently favourable change brought no improvement to the patient,

because it was not accompanied by any mitigation of the mortal symptoms exhibited in the disorder of the stomach, liver, and duodenum, and the wasting consequent thereon. Neither did the pulse fall with the subsidence of the febrile fits; on the contrary, it beat 120 in the minute, and some hurry of breathing became now evident for the first time. The bowels continued to act without medicine, and a slight trace of bile was now discoverable in their contents, but their fetor remained unabated. The patient continued to be much annoyed by the quantity of gas secreted by the stomach and intestines; which, besides giving the sensation of uneasy fullness, helped to excite vomiting, now become more frequent than ever, though still unaccompanied by straining or retching. As might be looked for in such circumstances, wasting and muscular debility made rapid progress; and the appearance of the patient became altered, in proportion to their advance. No noticeable change, however, took place in the principal symptoms, until about the beginning of July, when a sudden and considerable swelling of the feet and legs occurred, which was followed by much relief. The vomiting became less frequent, and the appetite improved a little, but still the processes necessary for nutrition remained imperfect; bile did not find its way into the duodenum, except in very minute quantities, and, although what was eaten was not so constantly rejected as formerly, it did not contribute either to strengthen the patient, or to arrest the progress of the *dépérissement* which proceeded unchecked unto the end. Shortly after this, some decay in the memory and perception became obvious; there was tendency to somnolency, and the pupils occasionally dilated; the patient was sunk down in bed, and declined the least exertion; the features were pinched, and cadaveric, and it became apparent that the cessation of the severer symptoms was only an evidence of the waning powers of life. On the evening of the 26th, the vegetable-like monotony of the patient's existence was broken, by the occurrence of a severe rigor, from which he recovered, to experience a second on the following evening, and a third on the morning of the 28th, which last extinguished the feeble and flickering flame of life.

The *post-mortem* examination was made fifty-eight hours after death, when decomposition had already made some progress, and, from circumstances, in a very hurried manner. The limbs were extremely emaciated, the trunk much less so, and half an inch of fat was found to cover the muscles of the abdomen, which alone was opened. Much fetid gas escaped upon puncturing its cavity, and some fat was found in front of the intestines. The stomach was very large and distended with gas, its walls were extremely thin, and some inflammatory patches were observed near the pylorus, on the lesser curvature. The pylorus itself was slightly thickened, and its orifice narrowed. The duodenum bore the marks of intense inflammation throughout, which had proved most destructive in that portion most contiguous to the Pancreas, which broke down into pultaceous shreds in the most cautious attempts to examine it. The inflammation extended for a short distance into the jejunum, and there stopped. The liver was slate-coloured, of ordinary bulk, and normal texture. The gall-bladder was healthy, and contained about three teaspoonfuls of orange-coloured bile. The ducts were all pervious. The spleen was not less than one-third larger than usual¹

but healthy. The Pancreas, with its envelopes greatly thickened, formed a mass whose diameter would somewhat exceed that of a large breakfast cup. It adhered to the left supra-renal capsule, but to no other of the adjoining viscera. When cut into, a creamy pus flowed out; and, upon further investigation, the *entire* gland was found to be converted into a cyst, filled with the pus just mentioned, and a few cheesy masses about the size of a bean.¹ Remains of septa in the cyst were visible, from which it would seem that the suppurative process was first completed in one portion of the organ, and then in another. The kidneys were healthy; only that part of the left kidney in connexion with the diseased Pancreas was red. I had no opportunity of examining the contents of the cyst, nor any part of the diseased structures, with the microscope.

REMARKS. In remarking upon the above case, which is not one of common occurrence,² the most obvious features which strike the eye are the vomiting and wasting, which commenced at an early period of the disease and accompanied it to its close. The absence of pain is also remarkable; and the more so, as it was certain from the physical signs, that the various phenomena, which the case presented, were not altogether dependent upon functional derangement of the abdominal viscera. Again, the immunity of the nervous system and integrity of many of the secretions, adds one to the occasional proofs which are afforded to us, of the great extent to which the destruction even of an important organ may go, without compromising any other system than the one immediately concerned. The pulse was increasingly quick throughout, but its acceleration did not seem to depend upon any particular phase of the complaint, but rather on the increasing debility of the patient.

Most writers who have treated of Pancreatic disease have admitted the frequency of vomiting,³ and some have considered it an essential symptom. Morgagni points out how Disease of the Pancreas may produce vomiting; but, in his third book, he says, "I even confess that this viscus has been found diseased by me and by others without a vomiting being the consequence of it." Dr. Abercrombie inclines to the same opinion, as does also Dr. Claessen of Cologne, who has reported upon 322 cases of Disease of the Pancreas. Indeed it seems reasonable to suppose, that in many cases of this nature, particularly when the morbid change has not proceeded far, vomiting should not occur as a constant symp-

¹ According to Gendrin, in large purulent deposits in the Pancreas, the pus has generally been found creamy and inodorous; Portal, on the other hand, states, that in complete suppuration of the Pancreas, the pus is sometimes of an intolerable smell, and in very large quantity, amounting to two pounds or upwards. The same authority speaks of such abscesses as occasionally the result of disease of the testicle; and M. Tonellé mentions two cases of puerperal peritonitis, attended with like consequences.

² Among the 322 cases of Diseased Pancreas recorded by Dr. Claessen, there is not one case of abscess.

³ The fact of large quantities of watery fluid being vomited, when the Pancreas has been found diseased, led to an opinion, at one time generally entertained, that the fluid rejected consisted principally of the secretion of that organ. This idea later writers have held to be incorrect, and have argued that the stomach is the source of the secretion, an opinion which this case puts beyond doubt, as it is certain that, long before death, the Pancreas ceased to be a secreting organ.

tom, inasmuch as neither the mechanical nor other condition for producing this effect, may exist in the required degree. In cases where obstinate vomiting does occur, where that vomiting has principally, or partly, a mechanical character, and where it can be made out that an enlarged liver or spleen is *not* the exciting cause; further, when the matters rejected are thin, ropy, sour, tasteless, or salty, and in considerable quantities; and when these conditions exist with pain, hardness, or tumefaction at the situation of the Pancreas, we should then, I conceive, be warranted in setting down the Pancreas as the *fons et origo mali*. Wasting, also, has been much insisted on, particularly by Dr. Pemberton, as indicative of Pancreatic disease. The record of this case agrees with that opinion, but I should be inclined to modify it generally upon the same principles which I have assumed as likely to determine vomiting. For instance, in cases when the functions of the stomach, liver, and duodenum escape the profound alteration which this case shows they sometimes undergo, I should not be prepared to expect a rapid emaciation; and in this view I am borne out by the reports of some of Dr. Abercrombie's cases, where the bodies were found after death to contain much fat.

This question, however, involves another, viz., the extent to which the Pancreatic juice is necessary to nutrition. The experiments of M. Bernard have tended to shew, that its function is to digest the fatty matters, contained in the food, and facilitate their absorption; but the confirmation, or disproof of this opinion will rest with the statistics of Pancreatic disease. It would seem, then, that we can hardly estimate the value of emaciation, *per se*, as a diagnostic mark of this complaint; but, in conjunction with the other signs enumerated as collectively presumptive of its presence, it becomes significant and valuable. Jaundice has often been found to accompany an abnormal condition of the Pancreas, which state may be presumed to influence the liver as it does the stomach, both mechanically and sympathetically. That it acts in the latter way is probable, from the experiments performed by Brunner upon dogs, from which he cut out a portion of the pancreas, and so produced death by bilious vomiting. In this instance, the jaundice was slight, and dependent upon the more or less complete arrest of the flow of bile into the duodenum, yet neither diarrhoea nor obstinate constipation, one or the other of which is stated generally to accompany this disorder, occurred. A very fetid condition of the stools existed throughout, which may probably be assigned to the absence of bile as a chief cause; yet I do not recollect to have ever observed the white evacuations of jaundiced subjects so offensive. Pain is much insisted on by Dr. Claessen as evidence of this disorder, but we have seen that this case forms an exception to his rule. The secretion of the salivary glands, which has been represented as vicarious of that of the Pancreas, when the latter has become suppressed, was not affected; and the circulation, which has been usually stated as seldom implicated in the general disorder, was much quickened on this occasion, its excitement being apparently proportional to the duration of the disease.

Before concluding this *resumé*, it may be worth while to speculate for a moment upon the probable programme of the morbid actions, which at length converted the Pancreas into a bag of pus. Keeping in mind the previous history of the patient and his habits, and particularly the facts that white stools, and vomiting chiefly in the morning, gener-

ally accompanied his annual dyspeptic visitation, we are rather led to conjecture that an enlargement of the Pancreas had existed for some years, probably dependent upon, or connected with, a low kind of inflammation; that disturbances of the other viscera, such as usually occur in the autumn, roused the slumbering fire into temporary activity, and each succeeding year with increasing effect; that the habits of the patient, favouring the morbid tendency, prevented a complete, and only permitted an apparent recovery, and that thus the way was paved for the last final effort of the destructive process. If further, we should try to connect that process with the physical signs which furnished so important an aid to the diagnosis, I should be inclined to presume, that an extensive inflammatory swelling of the Pancreas took place, as we see to happen to the parotid in mumps, by which the intestines became displaced, and dulness upon percussion resulted. That then this swelling subsided, upon the occurrence of suppuration, *as marked by the first series of rigors reported*, and the process lay dormant for a season, again finally resuming its activity, to become completed almost with the last breath of the sufferer.

It seems strange, that so decided an inflammatory action, as the necropsy gave us the evidence of, should have been unaccompanied by pain. I can only endeavour to account for it upon the supposition, that the inflammation was of a scrofulous nature, and the temperament of the patient sluggish and phlegmatic. This, however, can only be accepted as a partial explanation of a very curious fact in the pathology of this class of complaints.

I shall conclude this case by mentioning a fact which seems to possess some interest in connexion with it. Since the date of the matters here referred to, I have been consulted by a gentleman, aged 30, of active habits, a first cousin of the deceased, for a deep seated pain felt at the situation of the Pancreas, which is neither constant nor periodic, but somewhat capricious in its onset, and apparently uninfluenced by any plan of medical treatment or diet heretofore adopted. It is represented as being of a dull aching character, and is rather relieved by light, but aggravated by heavy pressure. It sometimes changes its situation to a small extent, but not for any length of time. It has occurred on several occasions, lasting from three to six weeks during spring or autumn. It has not been accompanied by any dyspeptic symptom, but seems to stand alone, producing no effect but that arising from the sensation of pain. Here, perhaps, we have a first indication of pancreatic disease, and if so, we may learn that a derangement of its organism, sufficient to produce a tolerably severe pain, may not give rise to any recognisable derangement of its functions, nor to any sympathetic disturbance of adjoining organs.

Ludlow, October 1850.

BIBLIOGRAPHICAL RECORD.

ON THE USE AND ABUSE OF ALCOHOLIC LIQUORS IN HEALTH AND DISEASE. Prize Essay. By WILLIAM B. CARPENTER, M.D., F.R.S., F.G.S., etc. pp. 283. London: 1850.

TEMPERANCE AND TOTAL ABSTINENCE, OR THE USE AND ABUSE OF ALCOHOLIC LIQUORS IN HEALTH AND DISEASE. By SPENCER THOMSON, M.D., L.R.C.S.E. pp. 184. London: 1850.

Early in the year 1848, advertisements appeared offering a Prize of One Hundred Guineas for the best Essay on the "Use and Abuse of Alcoholic Liquors in Health and Disease"; and it was stated that the Essay must contain answers to the following questions:—

"1. What are the effects, corporeal and mental, of Alcoholic Liquors on the healthy human system?"

"2. Does physiology or experience teach us, that Alcoholic Liquors should form part of the ordinary sustenance of man, particularly under circumstances of exposure to severe labour, or to extremes of temperature. Or, on the other hand, is there reason for believing that such use of them is not sanctioned by the principles of science, or the results of practical observation?"

"3. Are there any special modifications of the bodily or mental condition of man, short of actual disease, in which the occasional or habitual use of Alcoholic Liquors may be necessary or beneficial?"

"4. Is the employment of Alcoholic Liquors necessary in the practice of medicine? If so, in what diseases, or in what form and stages of disease, is the use of them necessary or beneficial?"

It is now matter of history, that the prize of a hundred guineas was awarded to DR. CARPENTER; but the adjudicators of the prize recorded their opinion of the great merits of another essay, which proved to be the production of DR. SPENCER THOMSON. It is far from our intention to question the strict justice of the adjudication; but, as the two essays are now before the public in a printed form, we consider that a few critical observations upon them will not be unacceptable to our readers.

The great reputation which Dr. Carpenter has acquired as a physiologist, invests every production which emanates from his gifted pen, with peculiar interest; and if, in the course of our remarks, we venture to dissent from some of the conclusions at which he arrives, we shall do so with that deference which is due to high attainments, though with that freedom which may fairly be used in the discussion of a debateable question. It is also due to Dr. Spencer Thomson that we express, in common with the adjudicators, our very high opinion of the merits of his essay; and we may go a step farther, and state that, were the two works placed anonymously before us for a decision as to their relative excellence, we should feel considerable difficulty in giving judgment. We should be inclined to award the palm to both, saying with the adjudicator in the *Bucolics*:

"Et tu vitulâ dignus et hic":

and we might close the discussion, not inappropriately, in the words of the same rustic judge:

"Claudite jam rivos, pueri: sat prata biberunt."

Dr. Carpenter is in practice, as well as in theory, a tea-totaller, and we heartily congratulate him upon the excellent bodily and mental health which he enjoys by an adherence to his system. Undoubtedly, the fact which Dr. C. brings before us, that his own elaborate literary productions have been achieved without any assistance from the use of fermented liquors, is a very strong argument in favour of the system of total abstinence. We quote the

following passage as an interesting piece of autobiography. "Having for several years past been himself performing an amount of steady mental labour, which to most persons would appear excessive, the writer may be allowed to refer to his own experience, which is altogether in favour of total abstinence from Alcoholic Liquors, as a means of sustaining the powers of performing it. Having been brought up as a water drinker, he never accustomed himself to the habitual use of Alcoholic Liquors: scarcely ever tasting them, except when occasionally led to do so by social influences, or when he believed that a small amount of stimulus would improve the 'tone' of his system, which is liable to a peculiar relaxation in certain states of the atmosphere. On determining, about four years since, to give up the occasional use of wine, etc., as a social indulgence, he still held himself free to employ it when he might think it likely to increase the general powers of his system; and for some time he continued to have occasional recourse to Alcoholic Stimulants, (never exceeding a single glass of wine, or half a tumbler of bitter ale), when he felt himself suffering under the peculiar depression just referred to. He gradually, however, found reason to doubt the utility of the remedy; and has, for the last two years, entirely given it up. During these two years, he has gone through a larger amount of mental labour than he ever did before in the same period of time; and he does not hesitate to say, that he has performed it with more ease to himself than on his former system; and that he has been more free than ever from those states of depression of mental energy which he was accustomed to regard as indicating the need of a temporary support to antagonize the depressing cause. In fact, he now finds that when these do occur, the use of Alcoholic Stimulants, (taken even in very small amount), is decidedly injurious to him; diminishing, rather than increasing, his power of mental exertion at the time, and leaving him still less disposed for it after their effect has gone off." (pp. 128-9.)

The essay of Dr. Carpenter is, from beginning to end, a denunciation of the use of fermented liquors, the employment of which is not only wholly unnecessary, according to the author, but is, in almost all cases, positively injurious,—the exceptions being admitted in a very few cases of adynamic fevers and sudden shocks to the system, when the administration of Alcoholic Stimuli is admitted to be beneficial. Dr. Spencer Thomson, however, does not go to so great a length. He reprobates, indeed, very strongly, the *abuse* of fermented liquors; but the moderate *use* of them he seems rather disposed to commend. Dr. Carpenter appears to us to be like a barrister, who is retained to say as much as possible upon *one* side of the question; Dr. S. Thomson is like a judge, who calmly reviews the evidence on *both* sides, and then sums up to the best of his ability. Dr. Carpenter's volume will be welcomed with enthusiasm by the tea-totalisers; and his advocacy is, no doubt, calculated most materially to strengthen their cause. The work of Dr. S. Thomson will be read with pleasure and profit by those who do not adopt such extreme views, but whose object is simply to learn the beneficial or injurious effects of fermented liquors upon the human system in health and disease. The personal characters and pursuits of the respective authors will, we think, afford some clue to the different conclusions at which they appear to have arrived. Dr. Carpenter is an author, and, we rejoice to add, a highly successful one; he has long relinquished the practice of physic as an active pursuit, and he is, therefore, wholly free from the annoyances, the fatigue, the anxieties of mind and body, which are inseparable from the pursuit of medicine as a profession. He can regulate his hours of meals, of exercise, and of study, in the manner most convenient and pleasant to himself; he can lie down at night without any fear of having his rest disturbed by clamorous applicants for professional assistance; and he is, moreover, blessed with a vigorous constitution, which needs no stimulation to make it competent to carry on the business of life. Dr. S. Thomson, on the other hand, is, as we gather from the perusal of his book, a country practitioner, exposed to

all the toils, the anxieties, and the vicissitudes, to which a medical man, in the country, is necessarily subjected ; getting his meals at irregular intervals, and sometimes not at all ; liable to constant interruption of his nightly rest ; and, perhaps, badly remunerated for his harassing toil. We do not, therefore, wonder that Dr. S. Thomson does not join in the enthusiastic love of weak tea and cold water, under all circumstances. We quote the following passage as a fair specimen of his views :—

“ We have still another class of labourers to consider—those who, from necessity, from the peculiarity of their worldly calling, are obliged to forego at times the proper amount of sleep, and who are called upon for a great amount of continued exertion in a limited time. If any cases require, or derive benefit from a stimulant judiciously administered, it is such as we have just now adverted to. If rest first, and then nourishment, can be taken, it should by all means be the plan followed. But at times this cannot be done ; the nervous system is exhausted from want of repose and overstraining, and yet repose cannot be given it. Such is frequently the case in the medical and in other professions and occupations ; a succession of nights of entire or partial loss of rest is endured, and yet the body and mind must both be active for the day’s duties. In these cases, no nourishment, no other stimulant, is so efficacious in supporting the nervous system and constitution, as a glass of sound wine or porter. The temporary use of these stimuli under such circumstances does not excite ; the *vis vitæ* is merely raised to its proper level. Without them, nourishment may be taken ; but in the absence of rest it will not be duly digested. It may be said, substitute tea and coffee : in such cases, these stimuli are sometimes worse than nothing. If alcohol is to be called a poison under all circumstances, tea and coffee used as nervous excitants are worse poisons still. Granted, they may for a time keep off sleep, but they do so by their peculiar action on the nervous system, which leaves it irritable and disordered to an extent so great, that sleep will not come when the fatigue is over. Under the circumstances we have been considering, a glass of wine, porter, or table beer, will not cause drowsiness or excitement ; that is, if not taken as long as the system holds up by its own natural *vis* ; when, however, it gets below par, if rest cannot be obtained, and exertion is then called for, then a moderate, judiciously chosen alcoholic stimulant, is of much service It has been said that where exhaustion cannot speedily be remedied by repose, the gentle stimulation of a hot fluid, such as coffee, and nourishment, ought to be the means of restoration. In some cases, however, even when exertion ceases, when sleep can be indulged in, but will not visit the overworn frame, and the appetite fails from mere exhaustion, there is nothing which will do more to restore both than a moderate dose of wine ; and that man’s judgment is to be pitied, who would refuse either to himself or to another, thus, as it were, ‘ ready to perish,’ the benefit of so valuable a gift to man.”

The first hundred pages of Dr. Carpenter’s essay are occupied by the examination of the effects of Alcohol upon the physical, chemical, and vital properties of the animal tissues and fluids ; and of the immediate and remote consequences of the excessive use of Alcoholic Liquors taken into the system. Under these heads, we have the usual description of the chemical effects of Alcohol upon the living textures. The phenomena of intoxication and of alcoholic poisoning are fully and minutely detailed ; and the catalogue of diseases which befall the drunkard, such as delirium ebriosum and tremens, insanity, inflammation of the brain, apoplexy, epilepsy, dyspepsia, acute and chronic inflammation of the liver, hypertrophy and atrophy of the same organ, diseases of the kidneys and skin, gout, rheumatism, diseases of the heart, etc., etc., are all duly and circumstantially described. We presume that this part of the work is intended entirely for the general public, and we think it by no means inadvisable, that the destructive effects of Alcoholic Liquors should be held up to public abhorrence, to deter the incau-

tious from the vice of excessive drinking ; but we pass it over as being uninteresting to the profession, inasmuch as every medical man knows perfectly well that the abuse of alcoholic drinks is the fruitful source of innumerable forms of disease.

In the succeeding portion of his work, Dr. Carpenter replies at length to the question, whether there are any peculiar circumstances which render the use of Alcoholic Liquors expedient or advisable ; as, for instance, under exposure to extremes of temperature, or to morbid influences, or when the mind or body is called upon to endure great or unusual exertion ? We need hardly say, that our author answers this question in the negative ; and it is only doing an act of justice to Dr. Carpenter, to state that his reasonings upon this part of the subject are characterized by the greatest acuteness and sagacity, and are supported by a mass of evidence which has been collected together with the utmost care and the most indefatigable labour.

In another part of the book, it is considered whether there are any circumstances, short of actual disease, which render the use of Alcoholic Liquors necessary or beneficial ; and this question Dr. C. is also disposed to answer in the negative, with, however, a few exceptions. Now here we are compelled to join issue with Dr. Carpenter ; for although we admit, with him, that there is no necessity for administering alcoholic stimuli to healthy children, that it is not justifiable to recommend them to all nursing women, and that they are not indispensable to old persons, yet we maintain that there are numerous instances, short of positive illness, in which a moderate use of fermented liquors is decidedly beneficial. Let us take, for example, the period of lactation ; and judging and acting from experience, rather than theoretical views, we cannot condemn, nay, we highly approve and recommend, the employment of a moderate quantity of fermented liquor, especially of good beer, during this epoch of a woman's existence. If we argued *à priori*, we might indeed agree with Dr. Carpenter, that good wholesome food is quite sufficient to produce an abundant supply of breast-milk, and to give to the woman adequate energy for the nourishment of her offspring ; but we have too often seen the attempt made in vain, to be persuaded that the plan should be enforced by any judicious practitioner. We have frequently witnessed, among the lower orders of society, the emaciation, the neuralgic pains, the utter prostration of body and mind, produced by lactation under circumstances of privation ; and the administration of a moderate daily allowance of porter has removed these symptoms, as if by magic. Dr. Carpenter indeed tells us, that if a woman cannot nurse her child without drinking beer, she ought to wean it ; and that "a judicious system of feeding, gradually introduced from a very early period in the life of a child, will generally be preferable to an imperfect supply of poor milk from the mother" : but these views are so purely theoretical, and if carried out they would lead to so much practical mischief, that we enter our solemn protest against their adoption. If ninety-nine women out of a hundred are able to nurse their children by drinking a moderate allowance of beer, which neither Dr. Carpenter, nor any other writer, has proved to be in the slightest degree prejudicial to their health, either present or prospective, then we conceive that such a plan, pursued by multitudes of our countrywomen, is far preferable to the inhuman proposition of tearing the infants from the breasts of their natural parents, and consigning them to the tender care of wet-nurses, or the precarious and dangerous experiment of bringing up by hand. There is not a shadow of evidence that the *moderate* use of fermented liquors, as employed by the women of this country, ever produced the slightest injury to either mother or child ; while the positive danger incurred by artificial feeding is too notorious to require comment.

In the last chapter, Dr. Carpenter treats of the use of Alcoholic Liquors in the treatment of disease ; but this most important branch of the subject is despatched in rather less than eighteen pages, which form the most meagre

and unsatisfactory part of the volume. In truth, the author is too much biassed by theoretical views, to offer any useful remarks upon a purely practical subject; and we accordingly find that in his zeal for tea-totalism, and his disgust for alcohol, he actually allows himself to speak slightly of the legitimate practice of medicine, and to defend the absurdities of hydropathy. "We may", says he, "keep our patient in town at his usual occupations, practise all kind of experiments upon his stomach, recommend fat bacon or lean chops, prescribe blue-pill and senna-draught, or quinine and calumbo, and ring the changes upon all the wines, spirits, and malt-liquors which the cellar can furnish, without effecting any permanent benefit. Whereas, if he can be induced to give himself a complete holiday; to betake himself to some agreeable spot, where there is sufficient to interest, but nothing to excite; to inhale the fresh and invigorating breezes of a mountainous country, in place of the close and deteriorated atmosphere of a town; to promote the copious action of his skin by exercise, sweating, and free ablution; to wash out his inside, and increase the tonic power of his stomach, with occasional (but not excessive) draughts of cold water; and to trust to the natural call of appetite alone, in preference to artificial provocatives; we shall be giving him the best possible chance of permanent restoration to health. There is, perhaps, no class of cases in which the benefits of the hydropathic treatment are so strikingly displayed, especially when it is carried on in a spot where all other aids concur to make it most effectual; and reasoning from analogy, the writer is strongly inclined to believe that it would be of similar efficacy in re-invigorating the system exhausted by other forms of chronic disease, and would, in most cases, be preferable to any form of alcoholic stimulants for procuring an increase of digestive and assimilative power." (pp. 269-70.)

Upon this passage we shall only remark, that no respectable practitioners keep their patients in town to make experiments upon their stomachs; and that the medical profession are quite alive to the advantages of pure air and change of scene. They do not certainly recommend their invalid friends to the experiment of the damp sheets and the other tender mercies of the Gräfenberg quack, and his English disciples, who, being unable to live by the respectable practice of their profession, keep hotels and lodging-houses under the more genteel name of *Hydropathic Establishments*.

The following passage, from the essay of Dr. S. Thomson, is more to our taste: "Let it not be supposed, that it is here meant to advocate either the cure, or the alleviation, of dyspeptic affections of any kind, being trusted to Alcoholic Stimuli, when they can be dispensed with; when we can substitute the better natural stimuli of air, exercise, relaxation, travelling, and such like; neither to suppose neglect of proper medical treatment: but, as society is now constituted, many, most men, cannot pick and choose their times and their seasons. They must keep on the 'battle of life', with its depressing anxieties and cares, amid the depressing physical influences of our large towns, from month to month, or from year to year, with little or no relaxation: these are the men who suffer from atonic dyspepsia. By all means, if they can, let them seek health and renewed vigour in the tonic natural stimuli we have just alluded to; but, if they cannot, it is folly, and worse than folly, to refuse to the exhausted nervous system, to the pale, flaccid stomach, a provision for the exigencies of civilized life,—which will do much to improve comfort, to add to the power of mental and physical exertion, and to prevent disease."

We had intended to offer some observations of our own upon the relative merits of the two systems of Temperance and Total Abstinence; but the following passage from Dr. S. Thomson's work so fully explains our own opinions upon the subject, that we conceive we cannot do better, in concluding this review, than to quote it entire:—

"Unquestionably, pure water is the natural drink of man; and to man in

a state of nature, it may be well adapted ; but when he begins to experience the benefits, but, at the same time, the wants and necessary accompaniments of civilization, variety is looked for ; and, being looked for, it is found, in wholesome abundance, in milk, in the juice of fruits, in the sap of trees, or the infusions of various vegetable products, which furnish pleasant and wholesome beverages. True, man, amid his discoveries, has found out and used many articles of food and drink which are injurious ; but this fact does not render the others less wholesome. Man has been blessed with the capability—which, more than any other, raises him above the mere animal—of becoming a religious being ; he has been endowed with intelligence, with reason, and with judgment ; and, by the exercise of these, he must learn to choose the good and reject the evil, not only in generalities, but as an individual. We know, that what will agree and be beneficial to one, will prove hurtful to another ; and the man who, knowing, feeling, that he is injured thereby, continues the use, even in moderation, of Alcoholic Liquors, or of some of the less active stimulants,—such as tea and coffee,—is almost equally culpable with those who habitually use alcohol, opium, or hemp, to produce intoxication. But yet he may err in using water alone ; for, not only may the requirements of the constitution, especially in civilized man, call for the use of some more nutrient or stimulant beverage, but, like compound drinks, the quality of the water itself, which he is compelled to use, may be bad, and productive of disease. Probably, in many instances, the quality of the water has been the real cause of man's resorting to the practice of qualifying it by various additions. The arguments which would reduce man to the state of a mere water drinker, are, perhaps, somewhat akin, in their origin, to those poetic ideas which have delighted to paint, in glowing colours, the advantages and virtues of savage life. If man was intended by his Creator to be a mere water-drinker, let him, by all means, return to the simple element ; but, at the same time, to be in conformity, he ought to confine himself to the root, berry, and acorn diet of our ancestors, and exchange his comfortable broadcloth for the natural sheep-skin. But if man has been endowed with faculties, by means of which he may investigate, and reduce to practice, for his own comfort and enjoyment, the varied qualities of those things which make up the sum of the beautiful creation with which he is surrounded,—then should it be his duty gratefully to use, without abusing, to enjoy, without exceeding, the gifts of his Maker."

ON THE PULSE By DR. W. A. GUY. [*Being an article in the Cyclopædia of Practical Anatomy*, edited by DR. ROBERT B. TODD.]

The treatise of DR. GUY is most valuable ; and contains in one view the most recent and authentic information on the subject, founded on the observations of others, along with numerous statistical tables, carefully compiled by the author. As the Cyclopædia, from its great extent, and consequently large price, is not likely, we fear, to make its way generally into the hands of the medical profession, we have extracted from the elaborate article alluded to, all the most important results, and we now present them to our readers, as a treasury of information which they may find of use in every hour of their professional life.

We place the following digest, sufficient for most practical purposes, before the profession, with the more confidence in its utility, from the impression, a well-founded one we believe, that many practitioners, even of competent skill and acquirements, are scarcely up to the knowledge of the day on this important subject. Those who desire to study it more profoundly, will derive much assistance from referring to Dr. Guy's article at length, and also the following sources of information ;—Dr. Harden, *Amer. Journ. of Med. Sc.*, vol. v, and Dr. Pennock for July 1847 ; the Treatise of Quetelet, *Sur l'Homme* ; Dr. Graves, *Dub. Hosp. Reports*, vol. v. ; Valleix, *Mém. de la Soc. Méd. de Paris*,

vol. ii, p. 312 ; Hourmann and Deschambre, *Archiv. Gén. de Médecine*, 2de série, tom. ix. ; Dr. Macdonnell, *Trans. of Brit. Assoc.*, 1837, p. 97 ; Dr. Knox, *Edin. Med. and Surg. Journ.*, vol. xi, and Nos. 131 and 146 ; Guy in *Guy's Hosp. Rep.*, Nos. 6 and 7 ; Mr. Blackley, *Dub. Journ. of Med. and Chem. Science*, July 1834 ; *Med. Gaz.*, June 10, 1839.

THE FREQUENCY OF THE PULSE was first alluded to by Kepler, and then observed more fully by Floyer ; followed at a later period by Bryan Robinson, Falconer, Knox, Graves, Nick, and Quetelet. The facts recorded by these authors, have first been brought together in the article of Dr. Guy, and a clear exposition of the frequency of the pulse, as it is affected by age, sex, posture, exercise, food, and other natural causes, as well as of its relation to respiration, has been attempted, with the following results. The maximum frequency is found in early infancy—the minimum in robust old age. The pulse continues to fall from infancy to adult age—attains its lowest point about 50—rises again afterwards, if feeble as well as robust persons are included in the estimate. In *infancy*, the frequency is variable ; the maximum being 165, and the minimum 104. The average is about 140 at birth, falling rapidly during the first weeks of life, the mean being, according to Billaud, 106 from one to ten days of age ; 103 from one to two months ; and 87 from two to three months, but the maximum is considerably higher and the minimum lower than the numbers indicated. The results of Valleix, Gorham, and Trousseau, however, show a higher range than Billaud. The following table exhibits the frequency of the pulse at quinquennial periods, indicating at the same time a law of progressive decrease, from the beginning to the end of life, with an increase during the period of decrepitude :

Age 2 to 5	Mean	105	Age 30 to 35	Mean	73	Age 60 to 65	Mean	72
5—10	"	93	35—40	"	73	65—70	"	75
10—15	"	88	40—45	"	75	70—75	"	74
15—20	"	77	45—50	"	71	75—80	"	72
20—25	"	78	50—55	"	74	80 and upwards	"	79
25—30	"	74	55—60	"	74			

The irregularities observable in the above table are probably due to an insufficient number of observations. The average frequency of the pulse at the several leading periods of life is as follows :

At birth.....	140	Adult Age.....	75
Infancy.....	120	Old Age.....	70
Childhood.....	100	Decrepitude.....	75 to 80
Youth.....	90		

SEX. During the first seven years of life, there is little difference in the pulse of the male and female. After that period, the mean pulse of the female exceeds that of the male by an average of about nine beats, its maximum frequency at all periods being above that of the male, as shown by the investigations of Leuret and Mitivié, Hourmann and Deschambre, and Dr. C. W. Pennock. To assist the memory, *the average pulse of the adult male may be stated at 70, and of the adult female at 80.* The lowest number recorded in the table in healthy males is 46, and in healthy females 52 ; but Heberden counted it 42, 30, and even 26 in healthy males, the latter being in a man aged 80, and Fordyce counted it in two old men at 26 and 20 respectively. Falconer found the pulse in two healthy females to be 36 and 24 ; and Dr. Graves in another to be 38. Pulses as low as 16 or 14 have been counted, but it is doubtful if they occurred in a state of health.

TEMPERAMENT. Nothing is yet known of the influence of temperament on the frequency of the pulse ; and the effects of stature also remain to be determined.

POSTURE. The effects of posture has been very carefully examined by Bryan Robinson, Dr. Macdonnell of Belfast, Dr. Robert Knox, late of Edinburgh,

Dr. Graves and Dr. Nick. *The Pulse is greatly influenced by posture*, in most cases, although there are some exceptions to the rule. The following are the leading results observed. In the healthy adult male, the mean numbers of the pulse are as follows : standing 79, sitting 70, lying 67, including all exceptions to the rule ; and excluding such exceptions, standing 81, sitting 71, lying 66. In the healthy adult female, standing 89, sitting 82, lying 80, including all exceptions to the rule ; and excluding such exceptions, standing 91, sitting 84, lying 80. In both sexes, the extremes are very remote from the mean results ; and the exceptions to general rules numerous : in both sexes, the effect of change of posture increases as the frequency of pulse increases ; this effect is much greater in the male than in the female, and is less in early youth than in the adult, the exceptions to general rules at the former period being also more numerous. The effect of change of posture is greatest in the forenoon—the inverted posture of the body lessens the frequency of the pulse ; and the varying frequency in different postures, is due to muscular contraction, as asserted by Robinson, Falconer, and Knox, and not to the varying position of the heart and its valves, or to the effects of gravity. The effect of change of position on the pulse is not transient, but continues as long as the respective postures are maintained ; and does not depend on the muscular exertion employed, as proved by Graves, who effected the change of posture, without any effort on the part of the persons examined.

EXERCISE. Muscular action increases the frequency of the pulse more than any other cause, according to Bryan Robinson, who found it 64, 68, 78, 100, 140, and 150, under the respective conditions of lying, sitting, standing, walking two miles an hour, walking four miles an hour, and running at the top of the speed. Passive Exercise, as in riding, or in carriages, has also a marked effect on the pulse, partly from the varying action of the muscles, exerted in supporting the different postures into which the body is thrown, and partly from mechanical causes influencing the circulation, as pointed out by Dr. Arnott.

TIME OF DAY. Haller, Gregory, Zimmerman, Hufeland, Quetelet, Foderé, Bostock, and others, represent the frequency of the pulse as greater in the evening than in the morning ; but contrary to the experiments of Keill, Robinson, and Falconer, it has been established as a general law, first propounded by Dr. Knox, and confirmed by the experiments of Nick, Guy, Sanders, Harden, and Hohl, that the pulse is *less frequent in the evenings than the mornings*, but with numerous exceptions. The difference is very various, being from 18 beats to 1. This diminished frequency seems to depend entirely on the exhaustion of the strength,—*being a less degree of that marked diminution of frequency, which often accompanies convalescence from severe disease* ; and not on the effect of continued rest. It has likewise been proved experimentally by Dr. Knox and the author, that the pulse is also very much less excitable in the evening than in the morning, a fact which accounts for the greater influence on the circulation, of food and spirituous liquors in the fore part of the day.

REST. Rest diminishes the frequency of the pulse.

SLEEP, FOOD, AND TEMPERATURE. The pulse falls considerably in young children, and slightly in adults during sleep. Food excites the pulse, especially in infancy, and vegetable less than animal food ; so do the mental emotions. Cold lowers, heat quickens the pulse ; at a temperature of 260°, Sir C. Blagden's pulse rose to 144. At a high elevation, the pulse rises ; but it is not determined how far the change depends on diminished density of the air, and how far on the exertion used in the ascent.

INTERMISSION OF THE PULSE, in some persons, is caused by every slight attack of indigestion, especially when attended by flatulence. The relation

of the pulse to the respiration has been variously stated as 4, $4\frac{1}{2}$, and 5 to 1. The average ascertained by the writer's experiments, 3.47 to 1; by Hourmann and Deschambre, in aged females, 3.65 to 1. According to Quetelet, at birth, 3.09; at five years, 3.38; fifteen to twenty years, 3.72; twenty-five to thirty years, 4.43; and at thirty to fifty, 3.88 to 1. In females, at birth, 3.09 to 1; fifteen to twenty years of age, 4.10 to 1; twenty to twenty-five years, 4.52 to 1; and at thirty to fifty years, 3.92 to 1. The proportion, according to the same author, of the pulse to the respiration, is lower in the same persons during sleep. The proportion also, in the same posture of the body, diminishes as the frequency of the pulse increases. The effect of posture on the proportion which the pulse bears to respiration is very marked; thus, the pulse being 64, the proportions were, standing, 2.95; sitting, 3.35; and lying, 4.97 to 1. The proportion which the pulse bears to the respiration is greater in the erect than the sitting posture, and in the sitting than in the recumbent posture. The respirations are also more numerous in the evening than in the morning.

ANATOMY, PHYSIOLOGY, AND PATHOLOGY OF THE EYE. By HENRY HOWARD, M.R.C.S.L., Surgeon to the Montreal Eye and Ear Institution. pp. 514. Montreal: 1850.

A few years ago, some excitement was created in the medical circles by the statement, that cataract could be cured by exposing the eye to the vapour of prussic acid; and a London practitioner, backed by a non-professional Scottish journal, turned this impression to good account. The experiment was fully tried at our leading eye-infirmaries, but completely failed; and met with no better success in the hands of many of our leading ophthalmic surgeons, although found to be undoubtedly useful in the removal of corneal opacities. As a remedy for cataract, therefore, hydrocyanic acid lost credit in this country, being nearly forgotten, when we were not a little surprised at finding, in the work before us, its boasted virtues re-appearing in all their pristine vigour, as seen at Montreal. To be sure, the vapour is assisted by veratria, electricity, and iodinic counter-irritation; but as these all go on merrily together, it is difficult to say to which agent the surprising result is due.

"By the above treatment", says Mr. Howard, "long persevered in, I have not only succeeded in curing hundreds (?) of cases of incipient cataract, but have also in very many cases succeeded in giving old people, who could not make their way alone, such sight as enabled them to read a moderate sized print" (p. 355). Three cases are related, which are indeed remarkable; but it is strange that in England such happy results have not followed treatment similar to that described in Mr. Howard's book. In these so-called cures of cataract, the question naturally arises, *were they cataracts at all?* and when a surgeon speaks of curing incipient cataracts by hundreds, the question presents itself in double force. We do not mean to imply that there is intentional deception on the part of the author; but may he not, like many others, have been mistaken in his diagnosis? We presume that the treatises of Messrs. Mackenzie, Lawrence, Middlemore, and Tyrrell, are not common in Canada, and that this work is intended to supply their place. Although not to be placed in competition with either of the first three, it is in many respects meritorious. But we entreat the author to be a little more correct in his orthography of names, should a second edition be printed. The eminent physician of Glasgow is spelt Mackenzie (105), Makenzie (432); Mr. Lawrence is Mr. Laurence (231). The late Dr. Hocken figures as Dr. Hocker (303); Janin is Jannin (409); Maunoir is Maunior (410); Mr. T. B. Curling is Mr. J. B. Curling (200); Dr. Marshall Hall is Dr. Marshal Hall (192); and Dr. Todd is several times mentioned as Mr. Todd, where, in fact, Mr. Bowman's name should have appeared. The commonest

attention in correcting the sheets would have prevented these palpable blunders.

In conclusion, we would recommend to the author a careful revision of his work, in its substance, its grammar, and its arrangement. It might thus be made creditable to the author, and to the Montreal press.

DEAFNESS PRACTICALLY ILLUSTRATED. By JAMES YEARSLEY, M.R.C.S. Eng., Surgeon to the Metropolitan Eye and Ear Infirmary, Sackville Street. Third Edition. pp. 244. London: 1850.

The following is a summary of the contents of Mr. YEARSLEY's book. 1. Anatomy of the ear. 2. Outline of the diseases which produce Deafness. 3. Catheterism of the Eustachian passages—safe, painless, and efficient. 4. Deafness from derangement of the stomach. 5. Deafness from morbid condition of the mucous membrane of the throat and ear. 6. Pathological connexion of the throat and ear. 7. Obstruction of the nose in connexion with Deafness. 8. Statistics of Deafness. 9. Best means of compensating for incurable Deafness. 10. Ear-trumpets. 11. Modes of treating Deafness when attended by partial, or entire loss of the membrana tympani, associated, or not, with discharge from the ear. Mr. Yearsley has relieved many cases of this description by gently inserting a small pellet of moistened cotton-wool, and carefully applying it to the remains of the membrana tympani.

We observe that the author puts in a strong claim to the gratitude of the profession and the public, for having almost suppressed ear-quackery. He says, "I trust I have said enough to show the absurdity of the indiscriminate syringing, and the application of acrid ear-drops, irritating acoustic oils, and ointments, which were almost the sole local means of treatment among the race of aurists previous to the first promulgation of my views. If I had only done this, I should rest satisfied that I had not written in vain. It is lamentable to think that a legitimate branch of medical science should have been thus left to unqualified pretenders, whose sole hold upon the public consisted, not in the benefits they could confer, but in reiterated advertisements and self-laudation." (p. 243.) Mr. Yearsley's treatise contains matter for reflection, and practical instruction.

HYDROCEPHALUS RECONSIDERED, AND ITS RELATIONS TO INFLAMMATION AND IRRITATION OF THE BRAIN DEFINED; with Cases from Hospital and Private Practice, in Exemplification of its Pathology, Prevention, and Successful Treatment. By THOMAS WEEDEN COOKE, M.R.C.S. Eng.; Medical Officer for the Diseases of Children at the Royal Free Hospital, etc. pp. 112. London: 1850.

The objects which Mr. WEEDEN COOKE had in view in writing this treatise on Hydrocephalus, appear to have been, *first*, to insist on the importance of distinguishing cerebral irritation, a disease of asthenia, from cerebral inflammation, a sthenic affection; *secondly*, to point out the impropriety of using the term Hydrocephalus as designative of a disease, whereas it is merely an effect, which is often absent, or does not appear until the disease has passed beyond that stage in which it can be easily treated; *thirdly*, to shew that cerebral disease in children is not so formidable in its effects as is commonly supposed; *fourthly*, to bring prominently into notice the use of iodide of potassium, and chlorate of potash, as highly efficacious remedies in the collapsed stage of cerebral inflammation, and in irritation.

The leading ideas contained in the book are good; but we must regret that Mr. Cooke has not given them a more extensive development than a hundred and twelve sparsely printed pages. Indeed, after deducting twenty-four pages for the introduction, and for some remarks on the general pathology of inflammation and irritation, as well as forty-two pages at the end, occupied with details of cases, we find only forty-six pages devoted to the con-

sideration of the symptoms, causes, treatment, results, and pathology of cerebral inflammation, and of cerebral irritation. This is too little for such important subjects. In his desire to be brief, too, the author necessarily becomes, at times, somewhat obscure: and his pathological views, especially of tubercle, at pp. 42-44, are somewhat heretical. We are surprised at finding no reference to the able observations of Drs. Marshall Hall, Abercrombie, Gooch, etc., on the Hydreencephaloid Disease; a common result of exhaustion and anæmia, and, as Dr. Hall has pointed out, indicating the use of nutritious food and stimulants; while Mr. Cooke has, no doubt, found the iodine and chlorine salts useful in cases of cerebral irritation from tubercle, or other forms of cachæmia. The author evidently includes all these cases under the head of irritation; a term, in our opinion, somewhat too vague.

While we make these remarks, we would not be thought hypercritical; and we willingly concede to Mr. Weeden Cooke the merit of endeavouring to make the cases, which have fallen under his notice, available for the instruction of his professional brethren, and of having, to some extent, succeeded. But we would have much preferred that he had developed his ideas on the subjects of cerebral inflammation and irritation in children, in a more extended form, and presented us with the well digested results of his experience, rendered more valuable by sound reasoning, and by careful collation with the opinions of other writers on the same subject. Such a work, from a competent author, would be a valuable addition to our medical literature.

PATHOLOGY OF THE HUMAN EYE. By JOHN DALRYMPLE, F.R.S. Fasciculi V and VI. London: 1850.

Just complaint has been made of the irregular appearance of several medical and scientific works now publishing in numbers. Mr. DALRYMPLE and his publisher, however, keep faith with their subscribers, and show an example which might be most advantageously followed by those entrusted with certain high publications, which for the present we forbear to name.

The fifth and sixth fasciculi fully maintain the character of the work, and justify the opinion we have already expressed as to its merits (vol. i, p. 356). Fasciculus V is devoted to Iritis and Aquo-Capsulitis. Congestion of the Choroid, and Glaucoma, form the subjects of Fasciculus VI. We never remember to have seen anything more truthful than the representation of Iritis, Fig. 1, Pl. XVIII. The proper tint and extent of the corneal zone is admirably depicted, and so is the dull and discoloured iris. Fig 4, too, in Plate XXII, most faithfully renders the appearances presented in an eye where Choroiditis is passing into true amaurosis and incurable blindness.

The instructions for treatment are clear and judicious, fully demonstrating the ripe experience and sound practical knowledge of the talented author.

RAPPORT ADRESSÉ A MONS. LE DÉLÉGUÉ DU GOUVERNEMENT PROVISOIRE SUR LES TRAITEMENTS ORTHOPÉDIQUES DE M. LE DOCTEUR JULES GUÉRIN. pp. 202. 4to. Paris: 1848.

This, as the title expresses, is the Report of a commission issued to investigate the treatment, by subcutaneous section, of Strabismus, Wry-neck, and other muscular contractions, together with rachitic deformities and cicatrices. The conclusions at which they have arrived are highly favourable to the practice. The subject, however, has been so fully investigated in this country, and the practice is so well established, that any comment, or analysis of the book, would now be superfluous. The Report is highly flattering to the skill and dexterity of M. JULES GUÉRIN. This work we only received a few weeks ago, although it was accompanied by a letter bearing date December 1848, and was evidently intended to have reached us in time for notice in an early number for 1849!

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

DR. A. J. CUMMINGS ON TANNIN AS A MEDICAL AGENT.

Dr. A. J. CUMMINGS of Roxbury, Massachusetts, has published, in the *Boston Medical and Surgical Journal* for August 14, 1850, a paper on the therapeutic uses of Tannin, which is especially valuable as a confirmation, by an independent observer, of the value attached to this medicine by Dr. SCOTT ALISON, in the January number of this JOURNAL. It will be seen, however, that Dr. Cummings confines his observations to the *astringent* properties of the remedy, and that he prefers it to all other medicines of this class.

In *dysentery*, Dr. Cummings has used it extensively, either alone or combined with opium in some form, and finds it, so far as an astringent is indicated, the most prompt in its action and salutary in its application. He has given it in more than one thousand cases of dysentery, diarrhoea, cholera, cholera infantum, and other bowel affections, and in no case has he regretted having given it, and in very few indeed did it fail. Dr. S. S. Whitney, of Dedham, uses it almost exclusively in dysentery, whenever an astringent is indicated. Tannin has advantages in its freedom from danger, and in its possessing the astringent property in so concentrated a form, that very small doses are sufficient; which, especially in children, is a great desideratum. The following are the formulæ given by Dr. Cummings. $\mathcal{R}$ Tannin $\mathfrak{g}$ j.; opii pulv. $\mathfrak{z}$ ss.; secalis cornuti gr. xv.; sacchari albi $\mathfrak{z}$ ss. M. Divide in chartas x. For adult males, and females, where the ergot is admissible. $\mathcal{R}$ Tannin gr. x.; pulveris ipecacuanhæ c opio $\mathfrak{g}$ j.; pulveris cretæ comp. $\mathfrak{z}$ ss.; sacchari albi $\mathfrak{g}$ j. M. Divide in chartas x vel xv. For children from one to five years old. $\mathcal{R}$ Tannin gr. xxv; pulv. opii gr. x; extracti cicutæ gr. viii; pulv. ipecacuanhæ gr. x. M. Ft. pilulæ x. One three or four times a day.

In some cases, in prescribing for children, he gives the tannin combined with Dover's powder, ground down with white sugar; and of course the prescription must be so altered, as to conform to the nature and circumstances of the case.

Dr. Cummings has successfully used it in the *sweating* of the last stages of phthisis, or low continued or typhoid fever. In a case of tubercular phthisis treated about two years since, the patient, a corpulent man, aged 46, sweated so profusely as to deprive him of rest, and weaken him rapidly. After trying the diluted acids, etc., Dr Cummings gave him at night a pill of Tannin and opium, containing one grain of each. On the second night the sweating was checked entirely, and from that time to his death he was not troubled with sweating, except when he omitted the pill. In another case, the patient, a young man, had been ill for several weeks with typhoid fever, and, on becoming convalescent, he was severely troubled with night sweats. Tannin, in one grain pills, at once checked the sweating, and his health rapidly returned.

In *hæmorrhage*, in almost all its forms, Dr. Cummings has used Tannin with success. In hæmoptysis, Tannin combined with opium and ipecacuanha, in form of a pill or powder, has, in almost every case, proved successful. The ipecacuanha and opium are old and well-established remedies; but they often fail, when given alone, to produce the desired result. Having, in a practice of ten years, used numerous articles of this class in the materia medica, Dr. Cummings gives Tannin the preference over all other medicines in this disease. In hæmaturia, hæmatemesis, and other forms of hæmorrhage, Dr. Cummings finds Tannin superior to any other remedy. Especially in hæmorrhage from the *bowels*, as the result of dysentery, producing

abrasions of the mucous membranes, or the rupture of small vessels from other causes, the Tannin will be found to act like a charm in arresting the bleeding. In uterine hæmorrhage produced by threatened abortion, when, in the early months of pregnancy, the ovum and its membranes become partially or wholly detached, or in that brought on by premature labour, Dr. Cummings has frequently used Tannin. It is true that, when abortion is unavoidable, the use of ergot may stop the bleeding. But it is always desirable, if possible, to arrest the hæmorrhage without producing abortion. Tannin acts upon the muscular fibres of the uterus, sufficiently to close the mouths of the bleeding vessels without expelling the contents of the uterus. Dr. Cummings relates the following case: He was hastily called to visit a lady who was said to be "bleeding to death". She was about three months advanced in her second pregnancy. The os uteri was dilated to the size of a twenty-five cent piece, with the membranes of the ovum resting over the mouth of the uterus. She had, by imprudently getting up several times, discharged a large quantity of blood; pulse very weak and trembling, countenance pale and haggard, ringing in her ears, thirst, faintness, and extreme prostration. Dr. Cummings gave her Tannin in two grain doses, combined with ipecacuanha and opium, every fifteen minutes, until the blood ceased to flow. In a short time the hæmorrhage was arrested; she passed a good night, had no return of the flowing, and did not miscarry. Sometimes it is necessary to use either the Tannin in larger doses, or combined with ergot, when the ovum is entirely detached, and abortion is inevitable.

In *hæmorrhoids*, Dr. Cummings has great confidence in this remedy. A clergyman who had been afflicted for many years, and had tried various articles, told him, after using Tannin, that he was completely relieved, and believed himself cured. It may be used in the form of an ointment, or a wash, as is most agreeable. $\mathcal{R}$ Tannin $\mathfrak{ss}$.; tincturæ krameriæ, $\mathfrak{zss}$.; aquæ rosarum $\mathfrak{zjss}$. M. Ft. lotio. Or, $\mathcal{R}$ Tannin $\mathfrak{zss}$.; sulphuris sublimati $\mathfrak{ss}$.; spermatis ceti $\mathfrak{zj}$.; adipis puri $\mathfrak{zj}$.; olei lavanduli gtt. v. M. Ft. unguent. Or, $\mathcal{R}$ Tannin $\mathfrak{ij}$.; sacchari albi pulv. $\mathfrak{zss}$.; olei lavand. gtt. v.; adipis puri $\mathfrak{zj}$. M. Ft. unguentum.

In *epistaxis*, Tannin may be used in powder, and snuffed into the nares, or blown through a tube or quill, and it will be found in almost every case to prove efficacious. In severe *salivation* from mercury, this article will also be found of great importance. In *aphthæ*, and other diseases of the mouth, where there is sponginess of the gums, or bleeding, as in scurvy, Tannin has no equal in the whole list of astringents. It may also be used as a gargle in relaxation of the uvula and tonsils, and the soft parts contiguous, in the proportion of from gr. vi to gr. x, to an ounce of rose water, with tincture of krameria. The krameria is, in itself, a powerful astringent, but it does not answer, alone, any very valuable purpose.

As an *antiseptic* in cleansing old sores and phagedænic ulcers, and that form of ulcer that so frequently follows varicose veins, Tannin, in the form of powder, especially in cases accompanied with hæmorrhage, immediately arrests the bleeding, and renders the ulcers clean and more disposed to fill with healthy granulations, and ultimately to heal. As an astringent collyrium, Dr. Cummings has also used the Tannin with marked relief, and considers it preferable, in all cases of *purulent ophthalmia*, to any other article with which he is acquainted.

DR. MARSHALL HALL'S TABLE OF PAROXYSMAL SEIZURES.

DR. MARSHALL HALL has published the subjoined table in the *Lancet* for July 20, 1850, in the course of his interesting series of papers on the Neck as a Medical Region. It exhibits a comprehensive and very intelligible epitome of his views. He regards Blushing and Sick-headache as phases of Paroxysmal Seizures.

CLIMATE OF DARTMOOR IN CONSUMPTION.

DR. W. C. RADLEY, of Newton Abbott, in the *Lancet*, for September 7th, 1850, says, that "an elevated open region is more congenial to the health of the Consumptive than a low, and sheltered situation; that the interior of a country is infinitely better than the vicinity of the sea-shore; and that the restoration of our pulmonic patients to health is more certainly insured by their inhaling an atmosphere in its purity, than by any other remedial means." He believes that, in these respects, Dartmoor possesses pre-eminent advantages. Its mean elevation is nearly two thousand feet above the level of the sea; it is more exposed to the rays of the sun, and possesses purer air, than the lower lands. Dr. Radley thinks the objections futile, that the moor has fogs, and is very wet, cold, and bleak. The fogs are beneficial to health, being charged with electricity; not resembling the fogs arising from rivers, or marshes. The rain is, indeed, abundant; but it falls rapidly, and percolates immediately through the sandy soil. The cold is at times great, but it is bracing; and, moreover, invalids might expose themselves to, or avoid it, at their convenience. The water is also pure. The soil is pure silex, with felspar and peat; and in this, together with the scantiness of vegetation, Dr. Radley believes much of the salubrity of the district to depend, there being no chalk, limestone, nor dense trees, to give out carbon. The peat, as an article of fuel, is also peculiarly fit for the organs of respiration, as it freely evolves naphtha.

Dr. Radley concludes, by strongly and confidently recommending Consumptive invalids to be sent to Dartmoor. The residence, however, must be *upon the moor*. The bleakness, the cold, and the fogs appear to us to be formidable objections to any resort for invalids; but we would recommend the subject to the consideration of all our professional brethren, who may require to advise change of climate to their Consumptive patients.

DR. BETZ ON GOITRE IN NEW-BORN CHILDREN.

Goître, in new-born children, is a disease as yet little noticed. The children affected with it are generally fat, and well-nourished. The Goitre sometimes has the form of a swelling resembling the thyroid gland, stretching across the neck, and liable to be mistaken for a simple fold of fat; sometimes the neck only appears broader than natural; and sometimes no remarkable appearance is observed. The symptoms to which it gives rise, are, difficulty of breathing, soon after birth; inspiration is prolonged, accompanied with a moaning tone; expiration is also difficult, and sometimes accompanied with crying; sometimes the breath is entirely arrested, and there is danger of suffocation. In the more severe cases, sucking is impossible, or very difficult; it induces dyspnoea, which also results from the mere act of drinking. The dyspnoea, or rather asthma, comes on in paroxysms. The Goitre consists in a simple hypertrophy of the thyroid gland; sometimes the whole is affected, sometimes only the two lateral lobes, sometimes only one lobe, or even only the apex of one. The swollen lobes penetrate behind the commencement of the œsophagus, or the pharynx, press these on the larynx, and, at the same time, by means of the tumour which they form at the back of the throat, narrow, more or less, the glottis; hence the dysphagia, and danger of suffocation. The affection seems to be hereditary. The so-called *asthma laryngeum* depends, in many cases, on hypertrophy of the thyroid gland; and many cases of atelectasis of the lungs may arise from this cause. When the danger is imminent, Dr. BETZ applies leeches to the thyroid gland, administers an emetic, and orders the mouth to be diligently washed out; in chronic cases, he employs iodine internally and externally. (*Henle und Pfeuffer's Zeitschrift*, bd. ix, heft 2 and 3, as quoted in *Journal für Kinderkrankheiten*, July and August, 1850.)

THE DIAGNOSIS OF TAPE-WORM, FROM THE CHARACTER OF THE NERVOUS SYMPTOMS INDUCED BY ITS PRESENCE.

M. LEGENDRE has published an interesting memoir, upon the Nervous Symptoms produced by Tape-Worm, in the *Archives Générales de Médecine* for June 1850. He places the facts of this department of diagnosis in a very clear point of view; and, on this account, we think it right to call the special attention of our readers to the following brief abstract of his paper. When anomalous Nervous Symptoms perplex the physician, it is always right to compare them with those which are known to be caused by Tape-Worm; and, if any room for suspicion of its presence exist, it is always imperative to administer a vermifuge. We say *always*, because the experiment is at least harmless, as the perfect safety, as well as the general success of the koussou has now been fully established on unimpeachable authority. We would, in all cases, prefer this medicine, or the oil of the male fern, to the bark of the root of the pomegranate, which is considered by M. Legendre to be the best. The latter is likewise, undoubtedly, a most valuable drug for dislodging the tænia; but it is not quite equal to the koussou, or the male fern.¹ The following is the substance of M. Legendre's paper.

Thirty-three fully reported cases are carefully analysed.²

Disorders of the cerebro-spinal nervous system occurred most frequently; viz., in twenty of the thirty-three cases. They were, in twelve cases, of a convulsive character, occurring several times, or oftener (being eight times epileptiform, and four times hysterical). In eight of the cases the convulsive movements were partial, being confined to the face, or to a single limb. In fourteen of the thirty-three cases, the convulsions were succeeded by vertigo and cephalalgia.

Swooning, complete or incomplete, was noted in about a fifth of the cases; viz., seven times.

Disturbed vision was noted in six of the thirty-three cases. This consisted in double vision, or in the presence of flocculi, of *muscæ volitantes*, and of luminous flashes. One patient is mentioned as having had periodical blindness.

Buzzing in the ears is only mentioned as having occurred in three of the cases.

A pricking, or gnawing sensation at the epigastrium existed in fourteen of the thirty-three patients. The symptoms, now enumerated, rarely existed singly in one patient, and two, or three of them were generally present in the same individual.

Whenever one or more of the above symptoms are observed, and no other explanation can be given, an investigation should be made, to determine whether they may not depend upon Tape-Worm. If the physician discover that the patient have a gnawing at the stomach, capricious, or insatiable appetite, abdominal pain, a feeling of general prostration, or itching at the entrance of the nostrils or anus, there can be little doubt of the presence of the parasite. M. Legendre believes, that the best time for giving vermifuge is when the symptoms are most urgent, or when some parts have been spontaneously voided. He says, that Wawruch, of Vienna, in an analysis of two hundred and six cases, attributes such occurrences to lunar influence; asserting that they occur most frequently at the full moon, or during its decline, and that it is, likewise, at these times that the patient suffers from an exacerbation of the symptoms. It was not till M. Legendre had finished his researches that he became acquainted with the analysis of M. Wawruch's paper, published several years ago; and which, from its value, we subjoin.

¹ LONDON JOURNAL OF MEDICINE, vol. for 1850, p. 896.

² The following are stated to be the sources whence the cases have been derived. "*Archives Gén. de Méd.*, 1840. *Gazette Méd.*, 1839, p. 601; 1840, p. 633; 1843, p. 38. LOUIS, Observations recueillies à l'hôpital de la Charité sur la Tænia. *Archives Gén. de Méd.* Méral, du Tænia et de sa cure radicale par l'écorce de racine de grenadier, obs. 14, 15, 17, 18, 19, 22, 24, 25, 26, 27, 82, 108, 119, 120, 121, 142, 154, 155, 157."

WAWRUCH ON THE CAUSES AND SYMPTOMS OF TAPE-WORM.

The following is an extract from an abstract, contained in the *Gazette Médicale* for 2nd October, 1841, of a paper published by PROFESSOR WAWRUCH in the *Medicinische Jahrbücher der Oesterreichischen Staaten*.

During the period of twenty years, Dr. Wawruch treated 206 persons affected with *Tænia*; 71 men, and 135 women. The oldest person was aged fifty-four; the youngest, three and-a-half years. Twenty-two were under fifteen years of age; and among these were six girls who had not menstruated. Most of the patients were from fifteen to forty years old. The patients belonged to the middle and lower classes; they nearly all inhabited the district lying along the Danube, or lived in low and damp dwellings. They followed very different occupations, and their mode of life was various. It is remarkable, that the same conditions which give rise to scurvy in Vienna also produce Tape-worm. The articles of food which seemed chiefly to engender Tape-worm, were bad bread, meals of milk, butter, cheese, potatoes, pork and mutton, and bad water. The diseases which preceded the formation of *Tænia* were gastric and cutaneous affections, but especially gastric and intermittent fevers. There were observed, forty-three cases of intermittent fever, twenty of gastric fever, sixteen of typhoid fever, ten of ringworm and herpes, forty-two of itch, eight of scarlatina, thirteen of measles, and two of chronic urticaria. Scurvy, syphilis, chlorosis, and other diseases which affect digestion, were also observed to precede *Tænia*; but, in general, few of the individuals affected with Tape-worm had not had lumbrici when young. The influence of hereditary predisposition is very doubtful. Dr. Wawruch only saw two instances; in one, a mother and daughter, in another, a father and son, had *Tænia*. Irregularity of the menstrual function seemed common; thus, thirteen females had only menstruated at the age of 16 years, twelve at 17, nine at 18, seven at 19, and one at 20. The duration of the disease was from a few months to ten, twelve, fifteen, twenty, twenty-five, and, in one case, even to thirty-five years. Of the 206 patients, three only, who were foreigners, had *bothriocephalus*; the others had *tænia solium*.

SYMPTOMS. The symptoms of *Tænia* are very various: the following are stated by Dr. Wawruch to be the most constant.

1. Dull pain in the frontal region, vertigo, noises in the ears; and, in some, a kind of idiosyncrasy for music.
2. Eyes dull, surrounded by a blue ring; œdema of the upper eye-lid; pupils dilated; frequent involuntary action of the muscles of the eye; various aberrations of sight, as amblyopia, diplopia, or *muscæ volitantes*. One patient complained of a periodical blindness during the day.
3. Frequent change in the colour of the face; lips lead-coloured; a peculiar look about the mouth and nose; the appearance of general cachexia is not constant, for the patients often preserve a flourishing aspect for some time: many of them say they have become thinner. Anorexia, alternating with such a voracious appetite, that the patients faint if they are not supplied quickly enough with food; desire for certain articles, as carrots, milk, wine, bread, etc.
5. Fetid breath, clayey taste, loaded tongue, salivation, nausea, and even vomiting of liquid, as clear as water, in the morning.
6. Itching of the nose and anus, and of the vagina in females; grinding of the teeth, especially during sleep; accumulation of a clear fluid in the mouth; transient heat, languor, palpitation. The sensation of a cold hand pressing on the heart (considered as a pathognomic symptom by Reinlein) has never been observed.
7. Abdomen tumefied; borborygmi; a sensation of suction, constriction, and pricking, around the umbilicus, and undulatory movements, as of a foreign body in the intestines,—especially in the morning; cessation of these symptoms after taking farinaceous food, hot bread, or *café au lait*; frequently diarrhœa, alternating with constipation.
8. When the disease has continued for some time, and the patients are of an irritable temperament, there often arise a train of nervous symptoms,—as melancholia, syncope, aberrations of the senses, disturbed sleep, frightful

dreams, partial and general convulsions, chorea, epilepsy, aphonia, and loss of speech. 9. The most certain pathognomonic symptom is the evacuation of one or more portions of Tape-worm, either spontaneously, or after certain severe illnesses,—as scarlatina, typhoid fever, pneumonia, etc. ; or after the use of certain articles of food, as garlic, horse-radish, cucumber, etc. ; or after the administration of anthelmintic medicines. The portions are sometimes evacuated at indeterminate periods, but generally at new moon, or at the decrease of the moon ; and, at these times also, the other symptoms are increased in severity.

NEW METHOD OF APPLYING NITRATE OF SILVER TO THE LARYNX,
OR TRACHEA.

DR. J. C. THOMAS, of Baltimore, U.S., thus writes in the *Lancet* for July 13th, 1850. Every one who has tried must be aware of the difficulty of introducing Nitrate of Silver into the Trachea, or Larynx, either in powder, or solution, according to the plan proposed by the French physicians.

If a piece of lunar caustic be held, with moderate firmness, on a small grindstone which is revolving rapidly, a very fine dust from the salt is thrown off in considerable quantities into the air. By holding the open mouth within a few inches of the stone, and drawing in the breath, any desirable amount of the powder may be inhaled. I am not in the habit of directing more than four or five inhalations at a time. A very simple, portable machine for the purpose, contained in a box, may be made by any mechanic of tolerable skill. All that is required is a stone about five, or six inches in diameter, half-an-inch thick, on the same shaft with a small pulley, which is connected by an elastic band with a wheel six, or eight times the size of the pulley. The caustic, which should be free from copper, or nitrate of potass, may be held on the surface of the stone by the hand, or by a spiral spring adjusted by a screw. I have been much pleased with the effects of this method, in recent catarrh, obstinate chronic cough, and various affections of the Larynx, and I have little doubt that it will be found useful in all cases where the use of the Nitrate of Silver is indicated.

DIAGNOSIS AND TREATMENT OF PULMONARY CONSUMPTION.

DR. JOHN HUTCHINSON, Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, truly remarks, that it has become too common to trust entirely to the ear in the diagnosis of thoracic disease, to the neglect of the three great symptoms of pulmonary lesion, viz :—

1. Loss of weight.
2. Diminished thoracic mobility.
3. Abnormal breathing sounds.

Each of these topics is instructively illustrated by the author. "A person may lose weight, and not have consumption ; but he cannot have consumption, and not lose weight. This striking feature of consumption, viz., loss of weight, is now met in the all-prevailing treatment of this day, the administration of cod-liver oil, a medicine intended to increase the weight by the deposition of fat, which arrests the deposition of tubercular matter, as if fat and tubercle were the antitheses to each other." "It is wonderful to contemplate to what an extent phthisis can rob the body of matter ; one man fell from 168 lbs. to 89 lbs. ; and Freeman, the American giant, from 271 lbs. to 141 lbs. (nearly 50 per cent.), and shrank nearly four inches in stature ! Such is the effect of phthisis pulmonalis. In fact, the great feature of this disease is LOSS OF WEIGHT. All other abnormal conditions are but secondary to this ; and if our patient have not lost weight, we have no right to say that consumption is present. We have not seen an exception to this in one thousand cases. The scales are therefore the most important instrument for diagnosing in this disease." [*Medical Times*, Aug. 10, 1850, etc.]

OBSTETRICS.

DRS. BARNES AND SACHS ON ANÆSTHESIA IN MIDWIFERY.

DR. ROBERT BARNES has published, in the *Lancet* for July 13th and 20th, 1850, a tabular analysis of twenty-seven cases of Natural Labour, in which Chloroform was administered by Dr. SACHS, in the Berlin Lying-in Hospital, and has appended some comments on the use of Anæsthetic agents in Midwifery. He is a strong opponent of this practice; and, in seeking to substantiate his opinions by the facts contained in Dr. Sachs' cases, he sometimes slightly transgresses the bounds of legitimate deduction. Allowing, however, for his being occasionally led away by preconceived notions, his remarks are worthy of much attention. The registered opinions of the opponents of Anæsthetic midwifery now before us, are particularly valuable, as they are accompanied by a statement of facts, from which the reader may draw his own conclusions. The time is approaching, when, from a full and honest comparison of data, the proper mean of the use of Anæsthesia in obstetric practice will become fixed. The antagonism of parties is rapidly subsiding: for now the intoxication by chloroform of all parturient women, (as a matter of routine,) has happily very few advocates: though an increasing number of sound practitioners are in favour of the practice in certain cases.

The following is the table of Dr. Sachs' cases, as drawn up by Dr. Barnes.

TABULAR ANALYSIS OF TWENTY-SEVEN CASES OF NATURAL LABOUR, IN WHICH CHLOROFORM WAS ADMINISTERED BY DR. SACHS.

No	Age, etc.	State of Labour.	Effects of Inhalation on			Remarks.	Result to	
			Pulse and Respiration.	Uterus.	Sensation.		Mo.	Chd.
1	24, prim.	24 hrs., pains strong ev. 3 min.	P. r. from 78 to 102; f. to 90. Resp. r. fr. 24 to 36, f. to 28.	Pa. stopped for 7 min.; ret. weaker and seldomer than bef. inhal.; rec. strength when eff. of inhal. had gone off.	Loss of cons. and sens., screamed at passg. of head.	... ..	R.	R.
2	21, prim.	20 hrs., memb. rupt., pa. of uncertain freq. and strength.	P. somewhat dim. in freq.	1st. inh.; pa. repeatedly stopped by renewed inhal. 2nd inh., compl. relax.; no percept. eff. on pains.	Groaning and weeping.	Quiv. of lips, shuddering dur. pains. Shiver. after del.	R.	R.
3	21, prim. (twins)	20 hrs.; memb. rupt.; hd. down; pa. ev. 2—3 min.; str. reg.	P. 90, somewhat incr.	Did not aff. contr., or retard del.	Groaned as in pain.	Some fever; headaches aft. del.	R.	B. alive, d. after.
4	29, mult.	Hd. ent. pelvis.	... ..	Seemed to incr. intens. of contr. and lab.	Shrieked at pass. of head: recol. nothing.	... ..	R.	R.

No.	Age, etc.	State of Labour.	Effects of Inhalation on			Remarks.	Result to	
			Pulse and Respiration.	Uterus.	Sensation.		Mo.	Chd.
5	27, prim.	Hd. deep in pelv.; memb. rupt.; os ut. compl. dilat.	1st inh., P. 92, f. to 72; last inh., snortg. resp., 44; p. 68.	Pa. arr. at first; ret. of full str.	Groaning; at one time gt. restlessness. and tossing abt.; recol. nothing.	... ..	R.	R.
6	23, prim.	12 hrs.; hd. deep; memb. rupt.; pa. str., ev. 2 to 3 min.	P. 82, f. to 76; r. to 80 on awakg.	Pa. compl. arr. 7 min.; then ret.	Cried out as shoulders passd. while still under Chl.	... ..	R.	R.
7	33, mult. two former lab., easily term. in 6 hours.	9 hrs.; hd. high; memb. not rupt.; os ut. not fully dil.; pa. short, ev. 4 min.	P. 82, r. to 96, f. to 80.	1st inh., pa. arr. 6 min. then ret. 2nd inh. pa. arr. 9 min.; ret., and memb. broke. 3rd inh., pa. arrest.	Groaned; tossed about just before birth. Recoll. nothing.	... ..	R.	R.
8	20, mult.; form. lab. quick.	Hd. near ext. parts, very strong pa. every 2 to 3 min.	P. 96, unalt.	Pa. not arrest.	... ..	... ..	R.	R.
9	prim. (twins)	Memb. not rupt.; os ut. ptly. exp.; pa. moderate.	P. 81, r. to 102.	Pa. arr. 3 times, ret. weaker as Chlor. went off.	Groaned; recoll. feeling pain.	Metritis and dysentery after deliv.	R.	B. alive, d. after.
10	25, prim.	Hd. near outlet; pa. strong.	P. 68, r. to 88 and 96, became irr.; resp. r. to 48, f. to 24.	Lab. slightly arrested.	Groaned; recoll. nothing.	2 hrs. after del. had conv.; had been epil.; d. in 19 hrs.	D.	R.
11	33, prim.	Hd. above outlet, pa. good and str., ev. 2 to 3 min.	P. 96, then 90 to 86; resp. incr. to 36.	Pa. arr. for 11 min.	Uneasy movements during pa.	... ..	R.	R.
12	24, prim. (Absc. of labia.)	Hd. at outlet; memb. rupt.; os fully open; pa. ev. 2 to 3 min.	P. 112, f. to 88; resp. 60.	Pa. arr. for a time.	... ..	Perin. somewhat torn.	R.	R.
13	Prim.	Hd. at outlet, emerging.	... ..	Lab. not arrested.	... ..	... ..	R.	Pu-trid.
14	27, mult.	Hd. near outlet; memb. rupt.; pa. strong, freq.	P. 88, f. to 84—92; resp. 20, r. to 28—42.	Pa. compl. arr.; uter. relax.; ret. when Chl. went off. Eff. on lab. complete failure.	Groaned and complained at ev. pa.	... ..	R.	R.

No.	Age, etc.	State of Labour.	Effects of Inhalation on			Remarks.	Result to	
			Pulse and Respiration.	Uterus.	Sensation.		Mo.	Chd.
15	30, mult. (4 easy lab.)	Hd. at mid. of pelv.; memb. rupt.; os exp.; pa. str. ev. 2—3 min.	P. not affected; resp. accel.	Pa. delayed somewhat.	Answered quest., felt no pain.	... ..	R.	R.

QUANTITY OF CHLOROFORM SMALLER; LESS DEGREE OF NARCOTISM INDUCED.

16	Mult.	Hd. at outlet; pa. strong.	... ..	Lab. not delayed.	... ..	... ..	R.	Pu- trid.
17	22, prim. (period head- aches.)	Hd. at outlet; memb. rupt.; pa. str., very painful, inclin. to delir.	... ..	Pa. slightly affected.	Groaned.	Strong shivering foll. deliv.	R.	R.
18	Secd. child. (1st labour painful.)	Hd. at outlet; memb. rupt.; pa. every 3 min.	... ..	Pa. stopped 5 min.; ret. as before when Chl. discontinued.	Refused to renew inh.	... ..	R.	not mntd.
19	37, prim.	14 hrs. in lab.; hd. at outlet; memb. rupt. artificially; pa. reg. ev. 2 min.	P. 112, f. to 75, r. to 100; resp. 55, f. to 48.	Pa. slightly enfeebled at 1st inhal.	... ..	Perin. somewhat torn.	R.	R.
20	24, prim.	Hd. at outlet, pa. str. and freq.	P. 76, r. to 81; resp. 20, r. to 24.	Pa. slightly aff.	... ..	Perin. torn to ext. of 1 in.	R.	R.
21	21, prim.	Hd. at outlet.	... ..	Pa. weak at first; afterw. recov.	Hd. nearly born when Chl. commenced. Under infl. 11 min.	... ..	R.	R.
22	26, 2d chd. (1st. labour easy.)	Hd. at outlet; pa. str. ev. 1, 2, 3, 4 min.	... ..	Pa. increased.	Hd. at point of expuls. when Chl. comm.	... ..	R.	R.
23	32, prim.	Hd. at outlet.	P. 104, r. to 120, f. to 96; resp. 32, 30, 48.	Pa. not affected.	Ditto.	... ..	R.	R.
24	27, 2d chd.	Hd. at outlet; pa. ev. 2 min.	P. 72, r. to 82; resp. 30, r. to 36.	Hd. quickly expelled.	Ditto.	... ..	R.	R.

No.	Age, etc.	State of Labour.	Effect of Inhalation on			Remarks.	Result to	
			Pulse and Respiration.	Uterus.	Sensation.		Mo.	Chd.
25	24, prim.	Hd. approaching outlet; pa. ev. 2 min.	P. 60, r. to 68, then f.; resp. 30, r. to 38.	Pa. somewhat ret. at first: chd. b. 39 min. after inh. consc.	... ..	... ..	R.	R.
26	35, prim. (chron. bronc., anasa.)	Hd. near outlet.	P. 88, f. to 72; resp. snorting, deep, 30.	Pa. arr. at first.	Groaned during pa.	Perin. torn sev. lines.	R.	R.
27	20, prim.	Hd. appr. outlet.	P. and resp. little aff.	Pa. slightly retarded.	... ..	... ..	R.	R.

We now proceed to give an abstract of the remarks made by Dr. Barnes on the various points of interest presented in the above table.

1. EFFECTS OF CHLOROFORM ON THE UTERINE CONTRACTIONS. Dr. Barnes says: "Out of fifteen cases in which complete Anæsthesia was induced, in eleven the Uterine Contractions were stopped, or enfeebled, and the labour consequently retarded. Out of twelve cases in which a minor degree of narcotism was induced, in eight the Uterine Contractions were retarded. The Chloroform appears to have been given very cautiously; its administration was, in most cases, withheld until the membranes were ruptured, the os uteri fully expanded, and the head pressing on the perinæum; in short, until the delivery was on the point of completion. Whenever inhalation is practised early in labour,—that is, before the expulsive stage is advanced,—Uterine Contraction is always impaired, and labour retarded. If the inhalation be deferred to a later period, the arrest of contraction in the womb is not so constant. So great is the accumulated excitability of the spinal marrow at the epoch of parturition,—so intense is the excitation of the esodic nerves, distributed in profusion about the orifice of the vagina, by the contact of the foetal head,—that a moderate inhalation is quite ineffectual in subduing the vehement activity of the diastaltic function.¹ The diminution of the Uterine Contractions under Chloroform, shows conclusively that Chloroform exercises a depressing effect, analogous to that of shock, on the spinal centre. It also proves, beyond a doubt, that Chloroform exerts a poisonous action upon the spinal and ganglionic system at the same time as it does upon the brain."

2. LACERATION OF THE PERINÆUM. This occurred in four cases; and Dr. Barnes hence considers that Chloroform does not prevent this accident. The relaxation induced by Chloroform, he says, is probably simply a relaxation of the muscular fibre; whereas the natural relaxation extends to the cellular tissue, and to the skin. He further observes: "The physiologist will also observe in this stage a proof, that pain—the psychical perception of pain—has its use. The abolition of pain has its danger. It has been remarked, that Chloroform inhalation, towards the completion of the expulsive stage, does not always arrest the action of the expiratory muscles. These cannot act efficiently, unless the chest contain a certain quantity of air, shut in by the closure of the glottis. It is by means of the powerful action of the expiratory muscles, added to the contraction of the uterus, that the head is driven through the ostium vaginæ. The danger of Laceration of the Peri-

¹ DR. TYLER SMITH thinks it proved, that "under the influence of Chloroform, stimulation of the spinal marrow is produced in the first instance.....In some cases, when the anæsthetic is used in great moderation, its effects, however long continued, may, perhaps, be slightly stimulant." LONDON JOURNAL OF MEDICINE, December 1849, p. 1111. [EDITOR.]

næum would, in many cases, be great, had not Nature provided a safeguard against excessive, and untimely expulsive energy—that safeguard lies in pain. It did not escape the acute philosophic observation of Denman, that a cry, uttered at the acme of a bearing-down effect, uncontrollable by the will, by opening the glottis, and permitting the escape of the retained breath, at once broke the force of the expulsive nîsus, reduced the pressure on the perinæum and uterus, and saved both from rupture. . . . Emotional influence is annulled when Anæsthesia is induced; when the sensation of pain is removed, the system takes no alarm at impending danger; the glottis remains closed; the expiratory muscles continue to act with all the blind violence of the diastaltic function; the order of parturition is subverted; an essential link in the chain of the phenomena of labour is wanting; the head is driven with irresistible fury upon the perinæum, before the process of dilatation is complete. It is not surprising that laceration is the result. It is fortunate that, at this stage of labour, the perinæum more readily gives way than the uterus."

Dr. Barnes certainly has not proved that the Chloroform is chargeable with the Laceration of the Perinæum in the four cases in the table. The women were all primiparæ; one was 37 years of age, and another 35;—patients therefore particularly liable to the accident.

3. CONVULSIONS. These followed delivery, in one case, in two hours, and the patient died in nineteen hours. No doubt, the patient was predisposed by her previous epileptic attacks. In another case (2) quivering of the lips and shivering occurred during the anæsthetic state, and shivering fits were renewed after delivery. In case 17, also, strong shivering followed delivery. Ether and chloroform have been found the most effectual means of exciting a fit in epileptic patients: and Dr. Barnes thus sums up his remarks on the probability of chloroform inducing puerperal convulsions in an epileptic woman—

"Labour is the exciting cause of Convulsions in epileptics.

"Chloroform is a certain exciting cause of a fit in epileptics.

"Combine these two conditions; give Chloroform to an epileptic patient in labour. What will be her chance of success?"

These remarks of Dr. Barnes are excellent, so far as they point out the danger of administering chloroform to epileptic women: but the argument must be confined to this class of cases.

4. METRITIS AND DYSENTERY. Dr. Sachs refers to Metritis as one of the diseases following the use of Ether: and M. P. Dubois, having observed two cases of Puerperal Fever in which Chloroform had been employed, concluded that they must stand in the relation of cause and effect. Dr. Barnes does not seem to lay much stress on this point.

5. BY ADMINISTERING CHLOROFORM, DO WE OBTAIN FOR THE PATIENT ESCAPE FROM PAIN, AND FROM THE CONSEQUENT SHOCK TO THE SYSTEM? We have here to consider the following questions:

a. Is the pain of labour physiological or pathological—that is, is it injurious or beneficial in its action?

b. Is the abolition of the sensation of pain in the parturient woman untended by danger?

c. Is it true that the anæsthetic agents in use really annihilate pain, and save the system from the consequent shock?

(a) Dr. Barnes refers to a lecture published in the *Medical Gazette*, Oct. 1849, for some of the considerations which tend to prove that the pain of labour is physiological, and subservient to a useful end.

(b) Dr. Barnes answers this question in the affirmative. He believes that, in addition to other dangers, there is a shock, oftentimes a deadly one, from Chloroform, as well as from pain. In Dr. Sachs' cases, at the commencement of inhalation the pulse was frequently raised 20 or 30 beats in the minute, and the respirations were increased to 40, 50, or 60 in the minute; the after

effect being to lower the pulse and respiration below the natural standard. This seems to Dr. Barnes still more dangerous, as it indicates a depressing action on the spinal and ganglionic systems. He thinks it moreover proved, that the sudden impulse of blood, and that containing a poison, may produce a shock to the nervous centres; and he refers to the occurrence of apoplexy, puerperal convulsions, fatal syncope, and puerperal mania.

(c) In reply to the third query, Dr. Barnes observes, "What mean those groans, that agitation, those suppressed mutterings or open cries, which all have observed in patients undergoing surgical operations in the depth of so-called anæsthetic stupor? Are they the expression of suffering, or are they not? Can it be maintained, that because patients on awaking express no recollection of that suffering, there was therefore no painful impression conveyed to the sensorium? In the case of parturition, the unconscious mother is as ignorant of her delivery as of its painful accompaniments. It might as reasonably be urged on that account that the child itself had not been born. Should we be justified in flogging a drunken man, acting on the anæsthetic principle, that since he might not *feel* the infliction at the time, or *remember* it afterwards, he could not be hurt? Is there no constitutional injury in this case independent of consciousness? The law of the sequence of shock on the nervous centres upon excitation of the peripheral nerves is as inevitable, as the sequence of effect upon cause. It has been erroneously concluded that Chloroform simply narcotises the brain, or rather, induces a deep sleep, during which state there is complete unconsciousness of pain, and a consequent avoidance of the shock which pain produces on the system. It is further assumed, that chloroformisation, carried to the extent which is necessary to subdue pain, does not affect the spinal marrow or the sympathetic system. A strict analysis of the nervous system, aided by experiment and observation, will show the fallacy of these conclusions.....

"In parturition as in surgery, in physiology as in pathology, the physical shock of nervous excitation of injury cannot be escaped from. In parturition as in surgery, the emotional shock of nervous excitation, or injury, may be avoided. In surgery, this may be an invaluable boon. Is it so in parturition? It is more than doubtful. The emotional influences, both those excited by the sensation of pain, and those independent of pain, are of immense importance in this complicated function. The voluntary power, too, is often of the highest utility. In woman, at least, the brain should be allowed to retain its integrity, to exert its beneficial controlling influence over her own conduct, as well as its salutary aid in attaining a safe delivery.....

"There is nothing better established in physiology, than the strict dependence of all the functions of the economy on the nervous system. Further than this, the nervous system itself is dependent for its healthy powers upon the mutual action and reaction of its component parts. The experiments of Dr. Marshall Hall demonstrate the analysis of the nervous system into three elements; the brain, the spinal system, the ganglionic system: they show, indeed, that each executes distinct functions. But they execute them only long enough to prove the physiological law. No one of the nervous centres can long continue to act or to live separately from the rest. The diastaltic power of the spinal marrow is soon exhausted, if the brain be removed. The peristaltic power is soon expended, if the viscera be cut off from their connexion with the spinal marrow. Inversely, the brain also soon ceases to act if severed from the spinal and ganglionic systems. Parturition is normally effected by the combined, or successive agency of *all* the nervous centres. Peristaltic, diastaltic, and voluntary motion, all contribute to the expulsion of the child, and the subsequent safety of the mother. Not one of those forces can be properly manifested in due proportion as to power, time, or succession, without the integrity of the others.....

"I am not aware that the most distinguished advocate for anæsthetic midwifery has modified his opinion, or his doctrine, as to the extent to which Chloroformisation should be carried in labour. The extent which he de-

scribes, corresponds with the fourth degree of Dr. Snow : in this degree, narcotisation is complete. Anæsthesia, therefore, as recommended by Dr. Simpson, is an unmistakeable reality. There can be no hesitation in concluding, that were the practice generally carried out to that extent, numerous deplorable and fatal accidents must occur. But a simple explanation lies in this fact ; viz., that Chloroform is very rarely given to the extent necessary to produce its characteristic effects ; in other words, that *anæsthetic midwifery is no longer a reality.*"

In concluding, Dr. Barnes makes the following remarks. "In the facts this paper contains, I have offered a complete vindication of what has been called the *à priori*—i.e., the physiological—argument against Anæsthesia in parturition. *A priori* and *à posteriori* reasoning, have, at length, though travelling by different roads, met at the same point. But the *à posteriori* conviction has been obtained at a fearful cost. Dr. Sachs refers to fifteen cases of natural labour, in which anæsthesia was induced by ether. Arrest of the pains was the common effect. In the case, it became necessary to use the forceps in consequence. Metritis and death followed the Anæsthetic and instrumental interference. In one case, convulsions ensued. Out of the twenty-seven Chloroform cases, in eighteen, more or less diminution of the uterine contraction was induced ; in four, there was laceration of the perinæum ; in one case, metritis followed ; in twelve, there were uttered groans, and other manifestations of suffering, although the patients did not remember it on recovery ; in one case, puerperal convulsions occurred, and death ensued in nineteen hours ; in two others, there was ominous threatening of the same appalling catastrophe."

DR. HIPPOLYTE BLOT ON ALBUMINURIA AND PUERPERAL CONVULSIONS.

In the *Union Médicale* for October 10, 1850, DR. HIPPOLYTE BLOT states that he has arrived at the following conclusions, from an examination of 205 patients, seen during his *internat* at the Maternité.

1. Albuminuria is frequent in pregnant women (41 out of 205).
2. In *almost* every case it is produced by simple renal hyperæmia.
3. Primiparæ are remarkably predisposed to this affection ; but this has not been yet explained.¹
4. To the pathognomonic sign of albuminuria, the presence of albumen in the urine, there are added other more or less variably concomitant symptoms ; as (a) Dropsy, either of the cellular tissue (œdema) or of the serous membranes. This dropsy is very often absent ; and, when present, disappears very rapidly after delivery, sometimes in an hour. (b) Lumbar pains, which are scarcely ever observed, and of which it is very difficult to understand the signification during pregnancy.

¹ The readers of the Journals may remember, that a reasonable explanation was offered by DR. CORMACK, in his paper on Puerperal Convulsions, published in the LONDON JOURNAL OF MEDICINE for 1849, p. 522. Having pointed out the way in which toxæmia is induced by pressure on the emulgent veins causing renal congestion, Dr. Cormack remarks, at p. 533 :—"In primiparous women there is—as a general rule—a greater tenseness and rigidity of the abdominal parietes ; and therefore in them the gravid uterus is much more apt, by its inward pressure, to cause dangerous renal congestion. This obviously explains why primiparæ are the most liable to Puerperal Convulsions ; and why convulsions in them are chiefly of a renal, and therefore of a severe epileptoid character. It is probable that, in them, albuminuria is associated with the œdema of the face and the upper part of the body, which is sometimes seen in many of them who escape convulsions : for it must be remembered, that the albuminuria and œdema are simply signs of congested kidney, and that congestion may exist—and indeed often does exist—to an extent quite sufficient to cause these phenomena, and yet be inadequate to produce toxæmia of sufficient intensity to cause convulsions."

5. The albuminuria of pregnant women is almost always unaccompanied by general reaction. Dr. Blot has not met with a single case of amaurosis.
6. In the majority of cases, the albuminuria of pregnant women disappears almost immediately after delivery.
7. Contrary to the generally received opinion, the albuminuria of pregnancy is often of little importance, when it is not accompanied by cerebral congestion (34 cases out of 41 were unattended by any complication). It has no marked influence on the progress of pregnancy, on abortion, on premature delivery, on the development and life of the fœtus, on the duration of labour, on the progress and sequelæ of parturition, or on the secretion of milk. Œdema is not constant; about one-half of the women who had albuminuria, had no infiltration whatever.
8. All the cases of puerperal convulsions which Dr. Blot has seen have been accompanied by albuminuria; but the converse is fortunately far from being the case.
9. The relation between albuminuria and eclampsia cannot be doubted, but its nature is unknown. Perhaps, Dr. Blot thinks, these morbid states depend on the same cause,—a simultaneous congestion of the cerebro-spinal axis and of the kidneys.

Dr. Blot then relates at length a case, in which a primiparous woman was attacked with Puerperal Convulsions. Her urine was albuminous, but there was no trace of œdema. The albumen disappeared on the day following delivery; but she died with tetanic symptoms ten days after. On post-mortem inspection, the kidneys were found to be the seat of slight vascular injection. M. Rayer examined then, and found no traces of nephritis. The calices and pelvis contained a slightly transparent red liquid, which was found to consist of epithelium cells of various forms and sizes, such as Dr. Blot had already found in the bladders of two women who had had albuminuria. From this case, he draws the following conclusions: 1. That albuminuria may exist without structural renal disease. 2. That eclampsia can occur when albuminous nephritis is entirely absent.

LOSS OF SPEECH DURING THE LATTER WEEKS OF PREGNANCY: CONVULSIONS FOLLOWED BY MANIA: RECOVERY,

MR. SIDNEY HENSON relates, in the *Lancet* for July 27th, the case of a young woman, pregnant with her second child, to whom he was called on the 29th of last December, but found her labouring under spurious pains. These continued till the 1st of January, when convulsions occurred for about two hours. The next day she was delirious, and remained so till the morning of the 5th. On the evening of the 6th, the pains being very violent, sixty minims of laudanum were administered, and followed by mxx of solution of acetate of morphia, and a drachm of chloric ether. This produced a deep sleep for eight or nine hours, after which she awoke quite conscious. She had not spoken since she had the convulsions: but could now articulate a few words with some difficulty. On January 17th, she was delivered of a living, but feeble female child, and was immediately able to speak without any difficulty whatever, and rapidly recovered.

DR. E. WILLIAMS ON A JAPANESE REMEDY FOR STERILITY.

Among the many botanical remedies which popular experience has made common in Japan and China, is one that is believed to exert specific influence upon the uterus, more particularly in cases of sterility and checked menstruation: and, from the numerous cases in which I have administered it with advantage, I am inclined to think it will become a valuable addition to our

materia medica. The tree from which the preparation is made is one of the order *Ternstroemiaceæ*, growing to the size of the English laurel, with leaves somewhat larger than the congou tea: they are alternate, lanceolate, serrated, downy on the under side, and emit, when bruised, a strong odour resembling pulegium and sabine. Its properties are said to vary considerably with the age of the tree, likewise as to its being gathered at the full or wane of the moon, and as to the season of the year. It is perennial, and grows best in moist and sheltered places. The mode of preparation is to take a quantity of the leaves, macerate them in as much rice-spirit (*samsheu*) as will just moisten them, for six hours; then express and give about a teaspoonful every hour. Two or three doses will invariably bring on the menstrual secretion, which can be maintained by a dose or two daily for any length of time. . . . That the root is aphrodisiac in its effects, I have not the slightest doubt, as I have administered it to animals with obvious results, and without any ill effects even to mules and castrati.

Having brought home some of the plant, I shall feel happy to forward some of the preparation to any established member of the profession, on the promise of giving me the result of the trial, and presenting it according to the instructions which I will forward with it. [*Lancet*, September 14, 1850.]

DISTORTION OF PELVIS: ANTEVERSION AND PROLAPSUS OF GRAVID UTERUS:
CÆSAREAN SECTION.

MR. R. W. SANNEMANN relates the following case in the *Lancet* for July 13, 1850.

CASE. Mrs. Y., aged 42, of diminished stature and antiquated features, had given birth to six children, the last of whom was delivered by craniotomy seven years ago. Eleven years since, she had struck her spine on a sharp edged surface, in consequence of a stool slipping from under her. Malacosteon, with contortion of the spine, and diminution of stature, supervened: the general health was also impaired by dyspeptic symptoms, and her urine was loaded with phosphates.

In January 1848, when she was in the seventh month of pregnancy, an examination *per vaginam* was made. The pelvis was greatly deformed, the acetabula being pushed backwards and inwards towards the sacrum, and the ossa pubis forming a projecting angle at the symphysis: the uterus was greatly anteverted. At 2 a.m. on the 28th February, moderate labour pains commenced. The uterine tumour formed a large pendulous body projecting over the symphysis pubis, with its lower border lying between the thighs: it could be elevated or moved to either side with ease. The abdominal walls were very thin. On examination *per vaginam*, the tip of the finger could just reach a spongy mass, apparently the placenta: there was considerable hæmorrhage during the pains. The small dimensions of the pelvis, and the debilitated state of the patient, precluded the possibility of delivery except by the Cæsarean section, which was performed twelve hours after the accession of pains. The uterus was at once exposed by an incision, five inches in length, over the most projecting part of the tumour, to the right of the mesial line. The uterus was next opened, and the child with its secundines, which presented at the os uteri with the shoulder of the child, were extracted. The organ contracted rapidly and firmly. The child was dead; and the mother expired at 2 o'clock on the following day, twenty-three hours after the operation, after having had three epileptic attacks. No bad symptoms appeared till twelve hours after the operation. At the autopsy, the uterus was found firmly contracted, and containing a coagulum. The dimensions of the pelvis were—antero-posterior diameter scarcely two inches, transverse three inches; the acetabula projected upwards and inwards towards the sacrum, considerably lessening the oblique diameter. The other viscera appeared healthy.

THE ALLEGED GALACTAGOGUE AND EMMENAGOGUE EFFECTS OF THE LEAVES
OF THE CASTOR-OIL PLANT.

Since the publication of Dr. Tyler Smith's paper in our last number, p. 951, two notices have appeared in the *Lancet* which certainly tend to confirm the belief that the Leaves of the Castor-Oil Plant really have, to a great extent, the properties imputed to them.

In the *Lancet* for 12th October, p. 439, DR. CORMACK says: "In corroboration of the statements of Drs. M'WILLIAM and TYLER SMITH, in the *Lancet* and LONDON JOURNAL OF MEDICINE, it is interesting to know that the Galactagogue properties of the Leaves of the Castor-Oil Plant are appreciated by the negresses of Jamaica. A gentleman, intimately acquainted with the popular remedies and nostrums of that island, in reply to my inquiries, writes as follows: 'I have seen the oil-nut leaf used by the negro women (particularly by the young women), to poultice their breasts, to use their own language, to make *piccaninny* suck *belly-full easy*, or in other words, to cause a copious flow of milk.' As the Castor-Oil plant can be easily grown in the neighbourhood of London, I hope that during next season many practitioners may test the Galactagogue properties of the Leaves."

DR. M'WILLIAM, in the *Lancet* of 26th October, calls attention to the following extract from the narrative of a voyage to the coasts of Chili and Peru, performed during the years 1712, 1713, and 1714, by M. Frezier, engineer in ordinary to the French king, from which it would appear that the Spaniards of Peru were acquainted with the Galactagogue qualities of the Leaves of the Castor-Oil Plant, so far back as the early part of the eighteenth century. M. Frezier, in his description of San Vincente, in the Cape de Verde islands, states, that among other plants, he saw there the "Palma Christi, or Ricinus Americanus, by the Spaniards in Peru called Pillerilla; and they affirm that the leaf of it applied to the breasts of nurses brings milk into them, and applied to their loins, draws it away. The seed of it is exactly like the Indian pine-apple kernel. In Paraguay, they make oil of it."

MATERIA MEDICA AND PHARMACY.

CAZENTRE ON THE THERAPEUTIC PROPERTIES OF CEDRON.

The seeds of Cedron are employed, in Central America, as a remedy for the bites of serpents, for hydrophobia, and for intermittent fevers. The tree is of the size of an elm; it is of the family of cedars, and grows in the whole of Central America, but most abundantly in the neighbourhood of Carthage. The seeds nearly resemble a large bean; they are inclosed in a matty, thick, ovoid drupe, of the size of a lemon. When fresh, these seeds contain an oily matter. The whitish farina which is obtained from them is extremely bitter; the bitterness is more lasting and disagreeable than that of sulphate of quinine. The following are the purposes to which they are applied.

1. BITES OF VENOMOUS REPTILES. The seeds of Cedron are the most powerful antidote known against the bites of the most dangerous serpents; the remedy is said to be infallible, if immediately applied. The natives of the country where it grows, always carry some of it with them when they go into districts infested with reptiles; hence fatal accidents are seldom heard of, although bites must be frequent.

Mode of Administration. Three or four seeds are scraped, and the farina is collected in a spoon, mixed with a little water or spirits, and immediately swallowed. Some of the powder, prepared in the same manner, is then applied to the wound, and covered with a piece of linen. The natives act more simply, by mixing up the grated seed, in the palm of the hand, with saliva, and swallowing it; they then immediately mix more, and apply it to the wound. A tincture, of rapid and certain effect, is also prepared by macerating the seeds in brandy. The first dose is often sufficient; but, generally,

it must be repeated twice or three times, according to the severity of the bite, and the subtily of the poison introduced.

2. INTERMITTENT FEVER. Cedron is frequently employed, at Panama, for this affection; and, in some localities, it is the only remedy used. Dr. Cazentre has often heard persons speak of having been cured by it of ague, which had resisted quinine. He recommends an inquiry into the efficacy of Cedron as a substitute for cinchona.

3. HYDROPHOBIA. Dr. Cazentre has been informed by persons, that they had seen mad dogs cured by the administration of this remedy, and that a bitten animal would be preserved, if it were administered during the period of incubation. This subject Dr. Cazentre recommends to be also carefully investigated. [Abridged from *Journal des Connaissances Médico-Chirurgicales*, 1st October 1850.]

HYDRO-IODIC ETHER.

It is now about twenty-five years since GAY-LUSSAC discovered Hydro-iodic Ether, yet this substance, though so volatile and rich in iodine, has never been employed medicinally. M. HURETTE thinks that it is a powerful remedy, and has performed numerous experiments for the purpose of determining its physiological effects. The mode of administration is simple. One or two scruples of the Ether are introduced into a small bottle, and then covered with an extremely thin layer of water. The bottle is next applied to the nostril, and inspiration effected, the Ether passing up through the aqueous covering. Fifteen or twenty inspirations are sufficient. Absorption takes place so rapidly, that iodine may be discovered in the urine a quarter of an hour afterwards. The physiological effects are those of iodine in their highest degree; yet the author never experienced any other inconvenience, after numerous trials, than a slight coryza. It does not appear that M. Hurette has made any clinical experiments with the Hydro-iodic Ether; but he has proved that it may be employed without any inconvenience, and analogy warrants us in recommending it to the notice of the physicians attached to the Brompton Hospital. (*Medical Times*, Sept. 14, 1850; abridged from *Gazette Médicale*, July 27th.)

MR. NUNNELEY'S experiments on Hydro-iodic Ether (*Trans. of Prov. Assoc.* vol. xvi, pp. 204 and 315) suggest caution in the use of this substance. In eight experiments, six of the animals died; all, with one exception, some hours after the effects had apparently passed off, and even when insensibility had not been produced. Mr. Nunneley believes that, "whatever anæsthetic property it might possess, it never could be employed in practice." Additional experiments on the lower animals would be required, before its administration to the human subject could be warranted.

PREPARATION OF ATROPINE BY MEANS OF CHLOROFORM.

At a meeting of the Academy of Sciences of Paris, on 14th October, M. Bussy presented a communication from M. RABOURDIN, druggist at Orleans, on the preparation of Atropine by means of Chloroform. The following is M. Rabourdin's process.

Fresh belladonna, gathered when commencing to blossom, is bruised in a marble mortar, and the juice pressed out; the latter is then exposed to a temperature of from 176° to 194° Fahr., to coagulate the albumen, and filtered. When the liquid is cold, four grammes (3i) of caustic potash, and thirty grammes (3vii and gr xliij) of Chloroform are added to each litre (1½ pint); the whole is shaken for a minute, and then set aside. At the end of half an hour, the Chloroform, charged with Atropine, is deposited, having the appearance of a greenish oil; the supernatant liquid is decanted off, and replaced by a little water. The water is successively added, and removed, till it becomes clear; the Chloroform solution is then received into a tubular retort, and distilled by a sand-bath until all the Chloroform has passed into the receiver. The residue is then treated with a little water, acidulated

with sulphuric acid, which dissolves the Atropine, leaving a green, resinoid matter: the solution, when filtered, is colourless. To obtain the Atropine pure, it is sufficient to add carbonate of potash, slightly in excess, to collect the precipitate, and to dissolve it in rectified alcohol, from which, by evaporation, beautiful groups of needles of Atropine are deposited.

When the fresh plant cannot be obtained, well-prepared extract of belladonna may be employed. Thirty grammes of extract of belladonna, obtained from the purified juice of the plant, are dissolved in one hundred grammes of distilled water. The solution is filtered; and two grammes of caustic potash, and fifteen grammes of Chloroform, are added. The remainder of the process is analogous to that already described.

M. Rabourdin believes this method applicable, in general, to substances containing organic alkalies. If it do not become an economical means of preparing these products, it will at least serve, in some cases, to determine their proportion in certain materials. [*Gaz. Méd. de Paris*, 19 October, 1850.]

CANTHARIDAL ETHER, AND SOME VESICANT PREPARATIONS OF CANTHARIDES.

By treating Cantharides with a small quantity of Sulphuric Ether, a green liquid is obtained, very rich in Cantharidine, which easily combines with resins, fats, or collodion. M. OETTINGER, of Munich, proposes to employ this, in various forms, for producing vesication.

CANTHARIDAL ETHER. This is formed by digesting one part of coarsely powdered Cantharides in two parts of sulphuric Ether, for three days, and expressing. The Ether is charged with Cantharidine, with a green oil, and with a yellow, wax-like matter. When applied to the skin with a camel's-hair brush, the Cantharidal Ether produces abundant blisters, in one or two hours in children, and in three or four hours in adults.

CANTHARIDAL TAFFETAS AND PAPER. A double layer of aqueous solution of isinglass is spread on silk, or paper; when this is quite dry, the following is applied. Cantharidal Ether, sulphuric ether, of each four parts; turpentine, colophony, of each one part. A brush, dipped in this, is passed over the prepared material twice, with a short interval between the applications, and always in the same direction. After twenty-four hours, a third layer is applied; and, at the end of a similar period, a fourth. After some days, a layer of isinglass is applied. At the time of application, a wet rag is passed over it to remove the gelatine.

CANTHARIDAL OINTMENT. This is prepared with equal parts of Cantharidal Ether and of lard. It acts intensely on children, after being rubbed in two or three times, and being applied for two hours.

CANTHARIDAL COLLODION. M. Oettinger prepares this by mixing equal parts of Cantharidal Ether and collodion.¹ [*Bulletin Général de Therapeutique*, 30 Sept. 1850.]

PROTECTION OF PILLS OF IODIDE OF IRON FROM THE AIR.

M. BLANCARD, in a memoir lately submitted to the Academy of Medicine in Paris, describes a process for the preservation of Pills of Iodine of Iron, so as to prevent the iron from becoming peroxidized.

This process consists in covering the pills with a sort of varnish, made with an ethereal solution of balsam of Tolu, deprived of benzoic acid by digestion in water. The rationale of the process is founded on the volatility of ether, and on the insolubility in it of the substance which it is desired to protect.

The pills, thus prepared, are of a dark iron-grey, shining, and have no disagreeable smell, or taste. When held in the mouth for some minutes, they give no evidence of the presence of a salt of iron. No iodine is disengaged. The commission, appointed by the Academy to report on the process, kept several hundreds in a bottle; the silver at the bottom of the

¹ We gave an abstract of M. Hisch's account of this preparation, at p. 962 of the LONDON JOURNAL of MEDICINE for October, 1849.

stopper, which acted as a permanent test, had not changed colour at the end of several months. The pills contain a small excess of iron.

The commission reported favourably on M. Blancard's process; and it was resolved that his memoir should be published entire in the *Bulletin de l'Académie*.

M. BOUCHARDAT suggested, that the pills might be rendered difficult of solution in the stomach. This might, however, be an advantage when it was desired that a medicine should reach more distant parts of the alimentary canal without being modified. [Abridged from *Gaz. Méd. de Paris*, Aug. 17, 1850.]

PSYCHOLOGY.

CASE OF LUNACY: BRIEF OF FATUITY AND FURIOSITY: A SCOTCH TRIAL.

An important Lunacy case was tried in the Sheriff's Court at Dumfries, in the first week of October, by the direction of Her Majesty's Court of Chancery, for inquiring into the mental condition of Mr. Pulteney William Mein, lately residing in Glencartholm, parish of Canonbie, and now an inmate of the Crichton Asylum.

From the evidence adduced, it appeared that Mr. Mein was originally of good parts, was highly educated, and had made considerable progress in the fine arts, but had shown for some time symptoms of unsoundness of mind. The origin of this was fixed as being in July 1849, although the mental disease had probably made encroachments before that time, and then became more marked.

Dr. W. A. F. Browne, physician and medical superintendent of the Crichton Royal Institution, deposed, that Mr. P. W. Mein had been admitted as an inmate on the 11th of June last. He considered him labouring under incoherence or imbecility of mind, on the following grounds: his aspect was vacant, stupid, and inexpressive; his conversation rambling, and on frivolous subjects; and his conduct frivolous, and characteristic of imbecility of mind. His conduct and conversation were characteristic of persons labouring under the first stage of dementia. Mr. Mein's memory was also much impaired; he did not recollect the names of persons with whom he had conversed half an hour before. He had extravagant ideas of his horses and dogs, and of every thing belonging to him. He also laboured under various delusions, as of having seen the devil, and of being able to make a coat; his articulation was also indistinct. He had materially improved since his admission, but still laboured under mental imbecility. Dr. Browne believed him quite incompetent to manage the ordinary affairs of life. His imbecility was continuous, not intermittent; and, though occasionally better, and occasionally worse, even at the best he laboured under delusions. The indistinctness of articulation, and the idea that everything belonging to him was the best, were symptomatic of the first stage of general paralysis of the insane. Dr. Browne could not determine how long Mr. Mein's mental faculties had been impaired; but it was probable, that he had for months, and it might be for years, laboured under melancholia, before he was affected with the mental imbecility deposed to. He had no hope of the patient's ultimate recovery, as, although there had been a partial improvement, yet Dr. Browne was not aware of a case of recovery in general paralysis of the insane.

Corroborative evidence was given by Drs. McCulloch, Baker, and G. Mein, and other witnesses. The jury gave a verdict to the following effect:—"Find unanimously that the said Pulteney William Mein is at present fatuous and insane, and that he is not fit to be trusted regarding the management of his own affairs, or the affairs of another, and that he has been in that state since the 31st of July, 1849, at least; also, that Pulteney Mein, father of P. W. Mein, is provident of his own estate, and capable of managing the estate of another; also, that the brief of furiosity, stating that the said P. W. Mein is *incompos mentis, prodigus, et furiosus*, is not proven." [Abridged from *Dumfries and Galloway Standard and Advertiser*, October 9, 1850.]

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

OCTOBER 12, 1850.

J. RISDON BENNETT, M.D., PRESIDENT, IN THE CHAIR.

The first meeting of this Society, since its amalgamation with the Westminster Medical Society, was held on Saturday, October 12, at the new rooms in George Street, Hanover Square. The meeting-room was crowded to excess, although many left without being able to obtain admission. The number actually present was 181, of whom 160 were Fellows, and 21 were visitors.

DR. J. R. BENNETT'S INTRODUCTORY ADDRESS. After expressing a hope that the exertions of the members would be continued, the President referred to the manner in which the Society had been developed—not by demolishing old institutions to rebuild them on new and untried foundations, but by interweaving the old with the new, as the changes produced by time and social progress seemed to demand. He then spoke of the utility of such an institution, not only to the profession but to the public at large, in fostering brotherly feeling, in promoting the mutual improvement of the cultivation of medical science, and in testing the truth of new doctrines and practices. The true interpretation and right application of facts might be said to be more needed than the facts themselves. Every fact in medicine required to be examined in various lights and points of view, before it could be safely made available. In concluding, he expressed a hope that the proceedings of the Society would be characterized by no spirit of detraction or petty jealousy; and that the discussions would be conducted in such a way as to conduce to the elucidation of truth, and their own improvement, and consequently the advancement of their profession, and the welfare of mankind.

LETTSOMIAN LECTURERS. The President stated that two Lettsomian Lecturers had been appointed: G. J. GUTHRIE, Esq., F.R.S, on Surgery, and Dr. G. OWEN REES on Medicine. The subject of the first surgical lecture would be "The means adopted by Nature for stopping Hæmorrhage from Large Arteries"; and Dr. Rees would lecture on some "Pathological Indications afforded by the Urine".

TWO CASES OF EXTRA-CAPSULAR FRACTURE OF THE NECK OF THE FEMUR were exhibited by MR. COULSON. Both patients were aged: one was a man, aged 77, the other a woman, aged 76. In both cases there was double fracture—a fracture through the neck, extending down the shaft of the bone, and a second through the inter-trochanteric space. This agreed with the statement of Mr. Smith, in his work on *Fractures in the Vicinity of Joints*, that in upwards of a hundred cases of extra-capsular fracture of the neck of the femur, which he examined, he found, without a single exception, a second fracture traversing some portion of the inter-trochanteric space.

ANGINA MEMBRANACEA AND ITS TREATMENT. By J. R. BENNETT, M.D. The author remarked, that the form of Pharyngeal Inflammation, described by Bretonneau as Diphtheritis, was comparatively little known in this country. It had usually appeared as an epidemic rather than a sporadic affection; and had probably hence varied in its aspects. Hence it had been described by some as croup, and more frequently as angina maligna: and it was evident, that diseases primarily of the pharynx, had been described under these or analogous terms by our countrymen. The investigations of Bretonneau had demonstrated that the epidemic angina, or diphtherite, was, except very rarely, unattended by sloughing, or even ulceration. The comparative infrequency of the disease in this country, might, to a certain extent, account for the want

of any precise information regarding it as a British disease. To supply this deficiency, Dr. Bennett related some cases which had come under his observation during the present year, and offered some remarks on their pathology and treatment.

The disease was epidemic; all the cases mentioned, as well as others, having occurred at the same period of the year. With regard to contagion, Dr. Bennett would not decide: some of the patients were in families where there were other children, who were not separated, and some of whom took the disease. With one exception, all the children seemed in good health when attacked; in all, the disease was adynamic, and the throat affection had become serious before there was much difficulty of breathing or of swallowing, or much external swelling. There was no preceding catarrh. Stomatitis prevailed at the same time; and Dr. Bennett was disposed to concur with the French pathologists in assigning a close relationship, if not an absolute identity, between the affections. The alleged existence of ulceration in stomatitis was not an indication of pathological distinction. Fibrinous exudation occurred in both diseases; and in stomatitis, ulceration was often more apparent than real. It must, however, be admitted, that, while ulceration rarely attended the disease when confined to the fauces and soft palate, it was more or less present when stomatitis occurred. In the general and constitutional symptoms, and probably in the treatment, there was the closest resemblance. In the treatment, he deprecated mercurial agents, and recommended the local application of nitrate of silver, and the internal use of the chlorate of potash, with a tonic regimen. In conclusion, Dr. Bennett said that he looked on the disease as the result of a specific epidemic influence, operating on the system through the blood, characterized by an adynamic type, and calling for special treatment. However much the general symptoms might be modified by the occurrence of laryngeal complications, the secondary croup which then set in was a distinct affection from the common sporadic croup of this country. Local treatment, whether in the simple or complicated forms, was of the utmost importance; and the more common form of stomatitis was essentially the same affection as that which attacked the pharynx.

DR. WEBSTER referred to the practice of Bretonneau in severe cases, of opening the trachea, and applying the solid caustic, through the wound, to the interior of the larynx. He, as well as Drs. G. Webster, T. Thompson, Crisp, Murphy, Chowne, and Glück, and Mr. Hird, agreed with Dr. Bennett in his views regarding the treatment of the disease.

OCTOBER 19, 1850.

J. RISDON BENNETT, M.D., PRESIDENT, IN THE CHAIR.

VALVULAR DISEASE OF THE HEART. By DR. SEMPLE. The author related the history of three cases of Disease of the Heart, in old persons. In one, no signs of Disease of the Heart had been indicated during life; in the other two, Dr. Semple was acquainted with the existence of Valvular Disease some time before death. The patients had not manifested any, or very few, cardiac symptoms. In all, extensive and serious cardiac lesions were discovered, consisting of ossification of the aortic valves, rigidity of the mitral valves, and a dilated, ossified, and rigid condition of the large arteries. The author concluded that these diseases were not so rapidly and invariably fatal as they are generally supposed to be. [Dr. Semple's paper is published at length, as an original article, at p. 1019 of our present number.]

SUMMARY OF DISCUSSION. MR. NUNN drew a distinction between those cases of Valvular Disease, in which the deposit was on the surface, and those in which it was between the layers of the membranes.

DR. CRISP observed, that the influence of the lesion on life would depend much on the age of the patient; and he thought that many of the diseases accompanying old age were even salutary, in diminishing the power of the heart in proportion to the failing powers of the system.

DR. GOLDING BIRD thought that the cases described by Dr. Semple might be merely instances of the changes incident to advanced age, and hence could scarcely be called abnormal. The regurgitant disease of the mitral valve might be regarded as a "safety-valve" in the obstructive aortic disease.

DR. SIBSON observed, that the treatment in heart-disease should be directed to remove the obstruction of the capillaries.

MR. DENDY believed, that, with quietude, disease of the heart might go on for a long period without interfering with life.

MR. CANTON had found incipient bony deposit in the lower portion of the aortic valves common in elderly persons. The sinuses of Valsalva were enlarged in these cases, and aided the safety-valve function of the regurgitant mitral valves by admitting more blood.

MR. BARLOW believed that, in diseased heart, life might be prolonged by quiet and care; and that the result would depend much on the condition of the muscular fibre of the heart.

MR. STREETER believed that there was a power of adaptation in growth, by which children with disease of the mitral valve might do well, under proper care. Hope should be sustained, to avoid accelerating the fatal termination.

OCTOBER 26, 1850.

J. RISDON BENNETT, PRESIDENT, M.D., IN THE CHAIR.

ON CERTAIN AFFECTIONS OF THE NERVOUS SYSTEM SIMULATING CHOREA. By G. PILCHER, ESQ. CASE I. In August 1847, Mr. Pilcher saw a young man, aged 20, in Berkshire, born of healthy parents, and living in a healthy district, who was affected with slight erratic movements of the upper limbs and face. There was also apparently extreme dyspnoea; the breathing was stertorous, and inspiration appeared to require the most laborious exertion of the muscles; expiration was less laborious. This had lasted for several months without interruption, except during sleep. Walking was very difficult, though the patient could keep himself erect with very little assistance. He was treated in various institutions, and had now in a great measure recovered, the following being his condition on October 20, 1850. The bowels, urine, and appetite, were all well; sleep good; pulse rather quick; face flushed; he blushed easily, and considered himself very nervous. No cause could be assigned for the affection.

CASE II. Mr. J. M., a respectable tradesman of Chelmsford, in 1837, had a severe attack of bilious fever; and in the next year, had occasional very unpleasant feelings in his head when sitting in a confined posture. Two years after this, the feeling had become more intense; he could not sit at ease without putting his hand to his head, though without being able to assign a reason. After this, when he was sitting in a confined posture, the head would "give a sudden snatch" to the left side: and this was always prevented when he was able to keep his hand applied to his head. In 1841, the affection had become much more severe; but frequently did not occur when the patient most feared it. Various remedies, as leeches, aperients, iron, nitrate of silver, electricity, etc., had been tried, but with at most only temporary success; and the disease still continued unabated up to the present time. It was mitigated in severity by mild tonics, and occasional aperients; and increased by nervous excitement, powerful purgatives, and depletion. There was an elevation of the right shoulder, with fulness over the right scapula, probably arising from the excessive action of the muscles of that side, especially the trapezius. The trapezius and sterno-mastoid muscles of the left side appeared partially paralysed. The patient had felt no pain in the head or neck.

Two analogous cases, in females, furnished to Mr. Pilcher by Dr. Lavies, were also read. The patients had recovered under tonic treatment.

REMARKS. Mr. Pilcher believed that ordinary Chorea was an affection of the excito-motor system, and mostly produced by excentric irritation. But

in the cases now related, no excentric cause could be assigned: the disease seemed essentially functional. He compared the choreic affection, to a certain extent, with the hysterical affection of joints, described by Sir B. Brodie; the alliance appearing to exist in the disorders being similar in character, commencing in the brain, but affecting different parts of the nervous system, the sensory nerves being affected in one series of cases, and those of volition in another. That they were brain, or mental affections, seemed proved by their occurrence in persons of weak mind, or whose intellects, naturally powerful, had been over-worked; and by the success obtained by renovating the mind, either through the medium of the body, or by directing it to more healthy occupations. No tenderness of the spine had been observed by Mr. Pilcher in the first two cases, nor could any mental cause be assigned.

SUMMARY OF DISCUSSION. MR. HIRD thought that Chorea might have various causes. In children, derangement of the alimentary viscera was the most common cause; other cases required tonics. He believed that sham operations were useful in some cases.

DR. THEOPHILUS THOMPSON believed, that these cases were distinct from Chorea, inasmuch as in the latter there was an existing, though imperfect, subserviency to the will, power not being impaired. He related the case of a boy, in whom the least motion brought on extreme dyspnoea. The boy had fallen into the water, and narrowly escaped drowning. There was tenderness along the sides of the lower cervical and upper dorsal vertebrae; there might be disease of the spinal chord, as had been found in a case mentioned by Ollivier. He had seen much benefit, in some anomalous nervous affections, from the use of cod-liver oil.

MR. HUNT believed that cases might arise from excentric causes, but that centric lesions might afterwards be induced. He related a case, which had improved under the use of cod-liver oil, and also of arsenic, given for psoriasis.

DR. FORBES WINSLOW had seen cold affusions to the spine very useful in cases of true Chorea; hence he considered this disease to have a centric origin.

DR. R. CHAMBERS recommended chloroform, after all other means had been employed.

MR. DENDY considered that in these cases there was unequal concentration of nervous power. The primary cause was probably in the cerebro-spinal axis.

DR. CRISP believed that there was a local affection of the nerves, consisting in a want of balance of nervous power.

MR. PILCHER believed his cases to have had a centric origin. He could scarcely believe the affection seated in the spine, but thought it rather a disease of volition; and in this view he was confirmed by the influence exercised by the mind in some cases.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

NOVEMBER 21, 1849.

JAMES SYME, ESQ., PRESIDENT, IN THE CHAIR.

CASE OF HERNIA, STRANGULATED WITHIN THE ABDOMEN, AND REMEDIED BY OPERATION. By JAMES SYME, ESQ. Mr. Syme, upon the 13th of October last, was asked by Mr. Sidey and Dr. Newbigging, to see a man about fifty years of age, a butler, stout, and rather corpulent. For eleven years he had been troubled by an inguinal hernia of the right side, and had worn a truss until the last six weeks, during which he had not observed any swelling, although the bandage had not been used. At twelve o'clock on the preceding night, he had suddenly been attacked with intense abdominal pain, with quick pulse, cold perspiration, and vomiting. A tumour, about the size of a hen's egg, was felt by Mr. Sidey in the right iliac region, without any external enlargement or thickening of the parietes. Leeches were applied, and several injections administered during the night, with some

appliation; but the symptoms continued until about two o'clock in the afternoon—fourteen hours from the commencement of the attack. All that could be perceived on examination, was a slight induration or resistance, opposite the internal ring, over a space not much larger than the point of a finger. In these circumstances, Mr. Sidey's detection of a tumour in the first instance, afforded sufficient ground for surgical interference. Having divided the coverings of the cord, Mr. Syme brought into view a dark coloured mass, at the internal ring, and readily drew out a hernial sac, about the size of a hen's egg, which was found to contain a portion of the small intestine. Searching for the stricture, he encountered a difficulty from the sac yielding to the slightest pressure, and returning, with its contents, into the abdomen. He, therefore, seized it with a pair of forceps, until he succeeded in passing the edge of his nail beyond the stricture, and, guiding the bistoury upon it, effected the dilatation necessary for accomplishing reduction of the strangulated part. The patient recovered completely.

CASE OF INTESTINAL CONCRETIONS. By MR. SHARP, of Cullen. [Communicated by DR. TAYLOR.] The patient, a boy of six years of age, son of a crofter, was seized with pains in the bowels, on the 5th July, and passed a concretion of irregular shape, and measuring four and a half inches in circumference. On the following day, his mother gave him a dose of castor oil, and in the afternoon some obstruction in the rectum was experienced, which Mr. Sharp found to proceed from the impaction of other two concretions above the sphincter ani. One of these was with some difficulty broken up and extracted. The other was drawn out entire by means of the curved handle of an iron table-spoon. It was an irregular mass, six inches in circumference, and two and a half inches thick. A second dose of castor oil caused the expulsion of a third concretion. The concretions were found to consist of fine fibres, interlaced in every possible direction, firmly compressed, and in some places resembling silicious matter. The fibres doubtless consisted of *mill-dust*, the substance derived from the tissue between the cortex and kernel of the oat. He had, for some time, been complaining of occasional pains in the side,—and was obviously weaker and less robust than other children of his age.

MR. GOODSIR thought, that the formation of intestinal concretions was, in certain individuals, favoured by the form of the colon. When the gut was large, and furnished, like that of the horse, with complicated sacculi, *stasis* of its contents might occur, and concretions be formed round a nucleus.

DECEMBER 5, 1849.

JAMES SYME, Esq., PRESIDENT, IN THE CHAIR.

INJURY OF THE PELVIS DURING PREGNANCY. By DR. ANDREWS. The patient, a woman aged 30, was admitted into the Royal Infirmary on Sept. 4, 1849, with a large swelling of the right labium, and a large tumour on the left side of the abdomen, having a doubtful resemblance to an uterus at the sixth month; there was also a mass, resembling the fundus uteri, felt on the left side, on examination *per vaginam*. She believed herself pregnant. She died on the 17th October. After death, the uterus was found to be displaced to the left side, and to contain a male foetus of about the sixth month: the umbilical cord was presenting in the vagina. There was also an irregular lobulated mass in the pelvic cavity; in removing the pelvic viscera, this gave way, and coagula escaped, with a considerable quantity of dark, reddish-brown, grumous fluid. The mass extended to the lower margin of the kidneys, and was adherent in front to the abdominal walls for about three inches above the pubes. It occupied the entire pelvic cavity, displacing the bladder upwards and forwards. It was mostly behind the peritoneum, except on the left side, and behind the uterus. It presented, on section, large masses of dark coagula, enclosed in imperfect cysts, together with dark grumous fluid. In all direc-

tions, it broke down easily under the finger. It appeared to have arisen from a violent blow which the woman had received on her hip, from the violent slamming of a door.

ANEURISM OF THE SUPERIOR MESENTERIC ARTERY OPENING INTO THE DUODENUM TWENTY-TWO MONTHS BEFORE DEATH. By DR. W. T. GAIRDNER. On January 4, 1848, the patient, a woman aged 26, was admitted into the Royal Infirmary of Edinburgh, suffering from vomiting of blood. She was dismissed apparently cured in a month; and died suddenly on November 28, 1849. On examination, a coagulum of blood, weighing two and a half pounds, was found in the peritoneal cavity, and was traced to a ragged lacerated opening in the angle between the lower part of the duodenum and the head of the pancreas. The coats of the duodenum were very thin in the immediate vicinity of this opening; and there was at this point a very small ecchymosed spot, slightly elevated, and perforated in the centre by a minute opening. The opening of the superior mesenteric artery was a little irregular in form; and, on passing a probe through it, a considerable dilatation was discovered in the line of the vessel, occupying the whole first portion of its trunk, and corresponding in situation with the tumour above described. By a little manipulation, a probe was pushed downwards, through the ragged opening in the peritoneum. The sac was composed of a thick and strong fibrous cyst, slightly oval in form, and not larger than a hen's egg, somewhat flattened antero-posteriorly, and with its long diameter in the axis of the artery. This cyst had evidently ruptured at its lowest point, and the blood had made its way through the cellular tissue between the coats of the duodenum, breaking up the muscular coat into two layers, and finally perforating the serous coat by a ragged opening. The sac contained a number of irregular and half-decolorised coagula.

DECEMBER 19, 1849.

JAMES SYME, ESQ., PRESIDENT, IN THE CHAIR.

TUBERCLE OF THE UTERUS. DR. J. Y. SIMPSON produced a specimen, taken from a patient who had been, for some time before death, under the care of Dr. Skae, in Morningside Asylum. A deposit of tubercle lined the inner surface of the Uterus and of the Fallopian tubes; the ovaries were free. The woman was about forty-five years of age, and, during her insanity, had manifested symptoms of sexual excitement.

NON-MALIGNANT RECURRENT TUMOURS. MR. SYME called the attention of the Society to a kind of Tumour, which he had frequently met with. When cut into, it exhibited a yellow-grey appearance, somewhat resembling adipose tumour; but it had a firmer feel, and seemed to contain some fibrous tissue. These tumours were apt to grow again after removal, and, although certainly not cancerous in the first instance, were apt ultimately to degenerate, fungate, and even cause death. When one was removed, several new ones sometimes sprang up in the same situation. They were more common on the trunk of the body than on the extremities.

JANUARY 2, 1850.

DR. ROBERT HAMILTON IN THE CHAIR.

DR. J. HUGHES BENNETT read a paper on the Treatment of Phthisis Pulmonalis, with illustrative cases. [This essay has been published as an original article in the *Monthly Journal of Medical Science* for March and May 1850, pp. 323 and 401.]

FEBRUARY 6, 1850.

DR. HUGHES BENNETT, V.P., IN THE CHAIR.

VOLTAIC BATTERY FOR MEDICAL USE. DR. WRIGHT exhibited two new forms of the Voltaic Battery, for medical purposes. It was with the view of testing the therapeutic effects which might result from the passage of a large

volume of electricity, in a high state of tension, through the human body, that Dr. Wright had constructed the galvanic arrangements now exhibited. The most powerful of these consisted of a number of small glass bottles, charged with a solution of bichromate of potash, acidulated with sulphuric acid, into which were lowered, by means of a simple apparatus, arcs of zinc, tipped at one extremity with platinum. The other variety consisted of small ink-glasses, containing, in a similar solution, carbon (ordinary cinders were used), and pieces of zinc attached to platinum, by means of threads of gutta percha. The physiological effects of these arrangements were stated to be as follow:—1st, on completing the circuit, a shock of great energy; followed, 2dly, by a sensation of warmth in the hands and wrists, when the conductors were grasped; 3dly, while contact was maintained, the current continued to pass, but the subject of experiment was unconscious of its flow; 4thly, on breaking contact, there was a second shock, followed, 5thly, by a repetition of the calorific sensation.

CASE OF PNEUMO-THORAX. By W. ROBERTSON, M.D. C. L., twenty years of age, a sempstress, was admitted into the Royal Infirmary, on the 16th January. She had for six months suffered from cough and pain at the chest. There was extreme prostration of strength, languor, and inability to sustain attention when questions were put, but no delirium. The respirations were short and hurried, causing pain in the left side of the chest. The patient complained much of want of breath, and of a frequent painful cough without expectoration. The action of the heart was exceedingly rapid, but regular. No pulsation could be felt at the wrist. The face was livid, and the lips swollen. The patient refused food, but her thirst was very urgent. Her position in bed was on her left side, and she could not, without assistance, change this posture. She had not slept for several days and nights. The *physical signs* were:—1. Distinct contraction of the left side of the chest, with almost total immobility during the acts of respiration. 2. Percussion sound normal over the whole right side, and over the upper third of the left; highly tympanitic, even upon the slightest tap, over the middle third of left side from the mamma nearly to the spine; dull from about the sixth left rib downwards. 3. Respiratory murmur puerile on the right side, and mixed with sonorous and sibilant râles; faintly audible in the upper fourth of the left side; in middle third, intensely bronchial, and accompanied both during inspiration and expiration with amphoric buzzing and metallic tinkling, the cough, the voice, and sonorous râles, in the same region, all partaking of the metallic character. No respiratory sound below the seventh left rib. The position and sounds of the heart seemed normal. The patient died within fourteen hours after her admission into the hospital.

Sectio Cadaveris. The heart appeared healthy. The right lung was rather emphysematous, and its outer and lower border presented a patch of recently effused lymph. Its bronchi contained some frothy mucus. The left lung adhered very firmly by its upper third to the parietes of the chest, and below to the diaphragm. The upper lobe was contracted, but still contained air, and seemed unaltered in texture. The lower lobe was much contracted, carnified, and void of air. A large cavity had been formed between the thickened surfaces of the pleura, in the left mammary and lateral regions; it contained a small quantity of turbid fluid, and a large quantity of air, which escaped with some violence when the cavity was opened into. At the part of the carnified lung corresponding with the top of this cavity, there was a patch of greenish lymph (?), about the size and shape of a half-crown, strongly resembling a slough, but exhaling no putrescent odour. When the parts were removed from the chest, and immersed in water, and when air was forcibly thrown into the left bronchus with an injecting syringe, it escaped in small bubbles from a minute aperture between the upper edge of the supposed slough and the substance of the lung. It seemed, however, to require some little effort in pressing on the piston in order to effect this rupture,

and when the parts were afterwards roughly handled, its dimensions considerably increased.

The nature of the case was made sufficiently obvious by the dissection. A sacculated empyema had found vent, through an ulcerated opening, into the bronchi. The contracted state of the left lung, and of the whole left side of the chest, showed that either this communication must have been formed a considerable time before the patient's death, or that the absorption of the effusion must have been far advanced before the perforation of the lung took place. The immediate cause of death seems to have been bronchitis of the other lung.

In his remarks on the case, Dr. Robertson supported the view of Skoda, advanced ten years ago, that, for the production of the metallic and amphoric sounds within the chest, all that is essential is a large cavity, full of air, with parietes capable of reflecting sound, not necessarily communicating with the cavity of a bronchial tube, or containing a single particle of fluid.

FEBRUARY 20, 1850.

DR. HUGHES BENNETT, V.P., IN THE CHAIR.

CAVITY IN THE LUNG. DR. SPITTAL exhibited the left lung of a woman who had been found dead, in the apex of which was a cavity of the size of a walnut, not communicating with the bronchi. It was surrounded by small hard and grey masses, resembling tubercle in the chronic state. He believed it to be an example of the spontaneous cure of tubercular disease of the lungs.

TUMOUR OF SUPRA-RENAL CAPSULE. By MR. CRAIG. (Communicated by Dr. W. T. GAIRDNER.) The patient had had a severe bruise on the loins when thirty-four years old. Twenty-six years after, in February 1846, he passed some bloody urine, with much pain, but apparently recovered in a few days. In April 1849, he began to suffer from neuralgic pain of the right hip and leg; no urinary symptoms were observed. In July, the course of the left sciatic nerve was the seat of pain, which was increased by pressure over the left kidney. He had flatulent distension, capricious appetite, and restless nights. Towards the end of the month, a hard moveable tumour was felt in the right hypochondrium. The urine contained large crystals of oxalate of lime, uric acid crystals, and amorphous matter. Emaciation rapidly progressed; and the patient died in January 1850.

Description of the Tumour. It was situated behind the descending colon, occupying the whole of the left hypochondrium, displacing the spleen towards the centre of the cavity. It adhered firmly to the lower dorsal and to the lumbar vertebræ, and to the lower ribs near their articulations. Large portions of bone were laid bare: and there were extensive exfoliations of the vertebræ. The tumour was attached to the upper part of the kidney, and was of a tolerably firm consistence, and yellowish grey colour, tinged very deeply at the upper part with blood. It contained cells, fibres, and a large quantity of granular matter; but none of these elements were in any way characteristic. In the kidney, two or three rounded masses of morbid matter, similar to the tumour, lay between the infundibula, among the cellular and fatty tissue exterior to the pelvis. Dr. Gairdner was disposed to think the tumour cancerous—a view which he considered supported by the presence of nodules in the lymphatic system of the kidney.

HÆMORRHAGIC MEMBRANE WITHIN THE ARACHNOID. DR. W. T. GAIRDNER detailed the appearances found in the case of a melancholic patient in the Edinburgh Asylum. The arachnoid, both cerebral and lining the dura mater, was covered with a thin fibrinous membrane, mostly of a yellowish white, or very pale rust colour, and involving here and there small portions of coloured fibrin, resembling clots of blood. Its microscopic appearance was that of decolorised fibrine, with some indefinite nuclei, and some granular matter.

There was no distinct appearance of vessels, or of regularly organised filamentous tissue.

MARCH 6, 1850.

DR. BEGBIE, V.P., IN THE CHAIR.

INGUINAL ANEURISM. Professor MILLER related a case of Inguinal Aneurism, in which the patient committed suicide by perforating the tumour with a pocket corkscrew. [The case is published as an original article in the *Monthly Journal of Medical Science* for April 1850.]

HÆMORRHAGE FROM A UTERINE POLYPUS. DR. PATRICK BROWN detailed a case, in which a Uterine Polypus had given rise to alarming hæmorrhage. The Polypus was removed, and proper means employed to prevent hæmorrhage, and recover the patient from her prostration. She ultimately recovered, though presenting a most ghastly appearance for years.

PECULIAR DISEASE OF THE NASAL FOSSA. The patient was a gentleman above fifty years of age, of healthy constitution, who, in the course of a feverish cold, had a very copious fetid discharge from the right nostril, with much pain in the right superior maxillary region. This soon left him at the time; but hung about him, in a subdued form, for years, being always increased by any inflammatory cold. After the acute symptoms had subsided, he had ordinarily a constant sense of partial obstruction of the right nostril; excess of discharge from it, increased by bending the head forward; fetor, but not constant, nor frequent, and always accompanied by the sensation of the discharge of some fluid into the nostril; dull pain in the right superior maxillary region, not constant, but seldom absent more than a day. The secretion of the right nostril contained pus-globules. The disease had ceased, after an attack of catarrh, seven years and a half from the first invasion of the disorder. His brother, and probably his mother, had laboured under a similar affection.

INFLAMMATORY ERUPTIONS ON THE MUCOUS MEMBRANE OF THE CERVIX UTERI. Professor SIMPSON had observed Eruptions at the Cervix Uteri and top of the vagina, referable to the vesicular, pustular, tubercular, papular, and erythematous orders of Wilan and Bateman. He had thus noticed uterine and vaginal herpes, acne, lichen, prurigo, eczema, and aphthæ.

MARCH 20, 1850.

DR. JOHN GAIRDNER IN THE CHAIR.

CICATRICES IN THE LUNGS. DR. W. T. GAIRDNER produced a number of specimens and drawings, illustrative of the effects of tubercular softening, ulceration, pulmonary apoplexy, and gangrene in the lungs. When cure followed any of these lesions, the appearances found after death were so nearly identical, that, from simple inspection of the parts, it was often impossible to draw any just conclusion as to the nature of the disease under which the subject had originally laboured. Dr. Gairdner expressed his belief, that some specimens, generally regarded as illustrative of bronchial dilatation, were, in fact, examples of cavities resulting from gangrene or ulceration of the lungs.

POISONING BY ARSENIC. DR. DOUGLAS MACLAGAN produced three stomachs, in which arsenic had been detected. Although several months old, and not kept in any preservative fluid, they were still of firm consistence, and tolerably fresh.

APRIL 3, 1850.

JAMES SYME, Esq., PRESIDENT, IN THE CHAIR.

ERYTHEMA NODOSUM. DR. BEGBIE read a communication on Erythema Nodosum, and its connexion with the rheumatic diathesis. [This paper was published as an original article in the *Monthly Journal of Medical Science*, for June 1850; and a copious abstract was given in the LONDON JOURNAL OF MEDICINE, for September 1850.]

ANÆMIA AND GOITRE. The PRESIDENT informed the society that there was at present, in his female ward in the surgical hospital, a very curious example of the complication of Anæmia with bronchocele, and prominent eyeball. The patient, a girl from Shetland, had been exceedingly exhausted by frequent menorrhagia and diarrhœa, as well as by depletion effected by medical means. Although now convalescent, she still presented the following symptoms, which, it appeared, had existed for many months:—pale, sickly appearance; considerable swelling at the root of the neck, evidently depending upon a uniform enlargement of the thyroid gland; the extraordinary prominence of eyeball; palpitation; and a humming sound in the neighbourhood of the great vessels of the neck.

APRIL 17, 1850.

JAMES SYME, ESQ., PRESIDENT, IN THE CHAIR.

FATTY TUMOURS. The PRESIDENT exhibited a very large Fatty Tumour, recently removed from the neck of a man, who was still under his care in the infirmary. The tumour had been of slow growth, and not only caused inconvenience from its size and situation, but was also the seat of painful sensations; thus differing from the descriptions of Fatty Tumours usually given in books. The Tumour, although very large, had been attached by a narrow base, and its attachments, as usual, were subcutaneous. Hence there had been no difficulty in effecting its removal. But in another case, on which he had occasion to operate lately, a Fatty Tumour, of seven pounds in weight, situated on the back, was covered by the trapezius and latissimus dorsi muscles, and attached beneath the scapula, between the ribs, and to the long muscles of the back. In this case, of course, careful dissection was required in order to remove the whole mass. Both cases were doing well.

MAY 1, 1850.

SIR WILLIAM NEWBIGGING IN THE CHAIR.

CRETINISM IN SWITZERLAND. DR. COLDSTREAM read a communication on the present state of Cretinism in Switzerland, and on the progress recently made in its treatment on the Abendberg, by Dr. Guggenbühl. He gave a detailed account of the origin, nature, and success of Dr. Guggenbühl's labours. His theory was, that the deplorable state of mental degradation denominated "Cretinism" could be best prevented by removing children, who manifested any liability to this condition, from the valleys where they were born, and by placing them in such an institution as that on the Abendberg, where they enjoyed all the advantages of pure mountain air, cleanliness, regular exercise, proper nourishment, and suitable mental training. By improving the physical condition of such children, the tendency to Cretinism was often overcome.

DR. GUGGENBUHL stated that he had now had ten years experience of the efficiency of the system which Dr. Coldstream had described. Last autumn, he had an opportunity of visiting in their homes a number of children, who had been inmates of his institution on the Abendberg. The success of his treatment, in a considerable proportion of these cases, had been most encouraging. For some months past, he had been travelling on the continent and in England, informing himself as to the state of Cretinism in the different localities which he visited. In Germany, institutions similar to his own had been for some time in existence, and report spoke favourably of their efficiency. He had seen well-marked cases of Cretinism in Yorkshire, Lancashire, Somersetshire, at Chizzleburgh, etc.

In some localities, dogs had been observed to become affected with goitre: and cattle, brought to certain valleys, as those of the lesser Rheinthal, did not thrive, but degenerated and became weak. In a great part of Switzerland, the ordinary food of the peasant consisted of maize, which, in the form of "polenta", was consumed at all his meals—three or four times a day.

The pellagra of Tessino and Lombardy was believed to be attributable to the excessive use of "polenta." Of late years, efforts had been made to improve the diet of the peasant class, and turnips, carrots, etc., were now very generally used. Although inclined to attribute a pernicious influence to insufficient or improper nourishment, he could not regard it as essential to the production of Cretinism. The gradual degeneration and extinction of the old *haute noblesse* of Switzerland could not have been due to this cause, but probably to their frequent intermarriages, and to the climate of the valleys in which they lived. In the valleys of Switzerland, the population must be renewed by the infusion of new blood, from time to time, or degeneration of the race would be soon observed.

MAY 15, 1850.

JAMES SYME, ESQ., PRESIDENT, IN THE CHAIR.

CASES IN MIDWIFERY. DR. CHARLES BELL read an account of two cases in midwifery requiring manual and instrumental interference. In the first, it was found necessary to pass the hand into the uterus, in order to effect the removal of the placenta. For several days after delivery, the case appeared to go on favourably. On the evening of the seventh day, the patient was suddenly seized with trismus. She continued in this state for upwards of six hours, when the spasms ceased, and did not return. On the tenth day, she had loss of speech, and hemiplegia of the whole right side of the body, but not of the face. Six weeks after her confinement, the patient was able to go into the country. She could now walk and speak nearly as well as before her illness, the only remaining trace of her complaints being an apparent difficulty in finding words to express her ideas.

The second case was one of twins. The head of the first child, a remarkably small female one, presented in the third position, and, the labour-pains being ineffectual, was finally extracted by the forceps. The child at birth showed but faint signs of life. By the use of the warm-bath, artificial inspiration, and stimuli, respiration was, in about half an hour, fully established. The uterine contractions were not renewed for two hours, and were at first lingering and ineffectual. What appeared to be the second bag of membranes was therefore ruptured; but the fluid which came away proved to be blood, which, it was afterwards ascertained, had been contained in a cavity between the two sets of membranes. The second set having been ruptured, a loop of umbilical cord descended, and was followed immediately by the head of the child. Every effort was made to protect the cord from pressure by pushing it upwards during the intervals of the pains; it ceased, however, to pulsate a few minutes before the delivery of the head; and the child, a remarkably large one, was still-born.

JUNE 5, 1850.

JAMES SYME, ESQ., PRESIDENT, IN THE CHAIR.

CASE OF CÆSAREAN SECTION. By GEORGE HARLEY, ESQ., AND DR. NIMMO. PROFESSOR SIMPSON read a case of Cæsarean Section, recently performed by Mr. Harley in the Edinburgh Maternity Hospital. The mother died from effusion into the air passages, consequent upon disease of the heart. The Cæsarean operation was had recourse to by Mr. Harley, a few minutes after her death, and the child was now doing well.

DR. SIMPSON read another case of Cæsarean Section, performed upon the living mother, by Dr. Nimmo of Dundee. In this case there was extreme deformity of the pelvis. The mother died a few days after the operation. The child was saved. The pelvis, a fine example of malacosteon, was exhibited to the Society.

TREATMENT OF AFFECTIONS OF THE LARYNX. DR. JOHN SCOTT read a communication on the treatment of certain affections of the Larynx, by the local application of the nitrate of silver in solution, by means of a sponge.

JUNE 19, 1850.

JAMES SYME, ESQ., PRESIDENT, IN THE CHAIR.

CASE OF LARYNGO-TRACHEITIS TERMINATING FAVOURABLY AFTER TRACHEOTOMY. DR. JAMES GILLESPIE read an account of a case in which he had recently performed Tracheotomy successfully. [It is published at p. 25 of the *Monthly Journal of Medical Science*, for July 1850.]

PATHOLOGICAL STATES OF THE LUNG CONNECTED WITH BRONCHITIS. DR. W. T. GAIRDNER read a paper on this subject. [This communication, in an extended form, is being published in the numbers of the *Monthly Journal of Medical Science*.]

EVULSION OF TENDONS. The PRESIDENT read the following case, recently communicated to him by Mr. Gerard, surgeon at Troup, near Banff:—John Laird, a middle-aged labourer, while turning a grindstone with his left-hand, on which he wore a thick worsted glove, or “mitten,” suddenly felt his thumb tightly fixed around the iron handle. He immediately attempted to stay the velocity of the machine, and, to his astonishment, discovered the injury. The second phalanx of his left thumb was very neatly separated at the joint, and had attached to it the tendon of the flexor longus,—the muscular fibres which had given way being traceable at the point of separation. From the time of the injury to the healing of the stump (which was effected by the warm-water dressing alone) he never complained of the slightest uneasiness in the fore-arm; nor did pressure along the course which the tendon had occupied, produce any feeling of tenderness.

URINARY AND SALIVARY CALCULI. The PRESIDENT exhibited two curious specimens of Urinary and Salivary Calculi. The urinary concretion had been sent to him by Dr. Paul, of Elgin. It was remarkable for the beautiful arrangement of the concentric layers of which it was composed.

The Salivary Calculus, which was of unusual size, had been sent by Dr. John Traill, of Arbroath, who likewise had furnished the following account of the case:—“A stout healthy man, aged 35, by trade a blacksmith, applied to me about ten days ago for a tumour at the angle of the lower jaw. On passing the finger into the mouth, its situation was felt to be under the root of the tongue, and within the ramus of the jaw. The man had been sensible of its existence for upwards of ten years, during which time it had gradually increased in size. In general, it caused but little inconvenience; but, on several occasions, had become enlarged and painful. These attacks had always been relieved by leeching and other treatment. On careful examination, I thought I detected a rough point; and, on making an incision, the nature of the disease became at once evident. Although I made a very free opening, I found much difficulty in removing the Calculus, and was finally obliged to break it up with strong forceps. A good deal of it was lost, and when entire the stone must have weighed about three drachms, and measured about an inch and a half in length. A small flat stone lay in a smooth cavity on one side, perhaps at the orifice of the duct. The Calculus seemed to occupy the situation of the body of the sub-maxillary gland, altogether posterior to the duct of Wharton.”

ATROPHIED PANCREAS. DR. W. T. GAIRDNER exhibited a specimen of remarkably Atrophied Pancreas, from the body of a man who had died of diabetes. The duct was of the usual length, but no glandular tissue remained, except a piece of the size of a small hazel-nut. Bouchardat considered that diabetes was essentially a vitiation of the pancreatic secretion. This view might be too exclusive; but there was now little doubt that diabetes was generally connected with derangement of the duodenal digestion, of which this case might be considered an illustration.

SURGICAL SOCIETY OF IRELAND.

JANUARY 12, 1850.

THOMAS RUMLEY, ESQ., IN THE CHAIR.

COD-LIVER OIL: PULMONARY CONGESTION CAUSED BY IT. DR. BENSON had found, in almost every patient under his care, who had died of phthisis while using Cod-liver Oil, that the lungs were congested and consolidated, not only in the vicinity of the tubercles, but nearly throughout the entire organs. He thought, also, that he had frequently observed symptoms of congestion during life in those who used the oil. In many cases, the rational symptoms improved, especially as shewn by increase in weight, more rapidly than the physical signs. Several cases were given in illustration of his remarks.

Summary of Discussion. DR. BAGOT had observed similar results, and thought congestion more likely to occur when the patients were confined in hospital.

DR. SPEAR had observed some cases in the Hospital for Consumption at Brompton, under Drs. Williams and Walshe, in which pneumonia of the upper lobes of the lungs could be traced to the use of Cod-liver Oil. He agreed with Dr. Bagot as to the probability of hospital confinement being a predisposing cause.

TUMOURS OF THE EYE AND ORBIT. DR. JACOB exhibited the following preparations. 1. A black, flattened, spongy tumour, about two inches in diameter, which grew from the conjunctiva, in front of the eye. He could not determine whether it were malignant. It was removed by the knife, and the divided parts healed kindly; the remaining structures of the eye appeared healthy. 2. A black tumour, removed from the eyelid. This he did not consider malignant, any more than warts or similar tumours which were obstinate in growth, and could only be removed by the knife, or by caustic. 3. A gigantic wart, which grew from the lower lid of the eye of an aged man. Dr. Jacob had at first thought it to be carcinomatous; but a careful examination of its appearance, and the non-appearance of the disease elsewhere, led him to form a different opinion, and to consider it as a cuticular or epidermic growth. He exhibited a drawing of a true malignant tumour, which illustrated the difference between the cases.

JANUARY 26, 1850.

ANDREW ELLIS, ESQ., IN THE CHAIR.

POPLITEAL ANEURISM TREATED BY COMPRESSION. MR. JOHN MADDEN related the case of a corporal, 32 years of age, who had Popliteal Aneurism of the right-leg. Dr. Carte's instrument was applied to the femoral artery, below the origin of the profunda, and Messrs. Read's to the vessel as it passes over the ramus of the pubis; the pressure of the instruments being alternated. The patient died on the twelfth day after the application of the pressure. On *post-mortem* examination, the sac was found to contain fibrine in concentric layers to the thickness of three-fourths of an inch; the centre was filled with coagulated blood. The femoral artery was pervious, except until within one and a half inch of the Aneurism, where the coats were thickened, and there was a pedicle of fibrine. There was a small Aneurism, of the size of a nutmeg, on the arch of the aorta, opposite the origin of the left subclavian artery; and also one of the gastro-duodenalis artery, the hæmorrhage from which had been diffused into the psoas muscle of the right side.

The following conclusions were drawn by Mr. Madden:—1st. That the patient died from the bursting of the abdominal aneurism; but whether

accelerated or not by the attempted cure of the popliteal one, by no means appears. 2nd. That no treatment could have saved the patient ultimately from death by the cause stated. 3rd. That the treatment of Popliteal Aneurism in this case, by pressure in the groin, or three inches below it, did not morbidly affect the part of the artery pressed on, which remained pervious, and exhibited no change of structure whatever. 4th. The healthy and unaffected condition of the artery at the point of pressure, refuted the statement of those pathologists, who state that pressure injures the vessel in case it should be subsequently necessary to operate on it. 5th. That the aneurism in the ham was in process of cure by the gradual deposition of layers of fibrine proceeding from the surface to centre of the sac. 6th. That the inch and half of vessel, immediately above the aneurism, was rendered impervious by a pedicle, or cone of fibrine.

SUMMARY OF DISCUSSION. MR. TUFNELL and DR. MACDONNELL thought the case favourable to the employment of compression; and the latter gentleman considered that it removed, as far as a single case could do, the objections that the artery sustained injury at the seat of compression, and that it was rendered unfit for the subsequent application of a ligature.

DR. BANON suggested caution in the application of compression, when an internal aneurism was known to exist. If employed at all, it should be gradual. In a case, cured by compression in four days, which he had related, the artery was found pulsating to within two or three inches of the aneurismal sac, immediately after the solidification of the aneurism.

DR. HARGRAVE approved of Mr. Madden's treatment. No evidence of internal aneurism had been detected; and he doubted whether this could have been done, though it was just possible that the aortic aneurism might have been discovered.

DR. MADDEN had been unable to detect the slightest stethoscopic indications of internal aneurism.

The PRESIDENT was of opinion, that when an internal and a Popliteal Aneurism co-existed, it would be better to let the patient alone, unless the aneurism in the ham were on the point of bursting. He would probably have pursued the same treatment as Mr. Madden in his case; yet the subject of treatment, under such circumstances, was worthy of the most serious consideration.

FEBRUARY 9, 1850.

DR. JACOB IN THE CHAIR.

COMPLICATIONS OF FEVER IN DUBLIN. DR. H. KENNEDY related two cases.

1. A woman, aged 30, was admitted into hospital in a dying state; cold, nearly pulseless, semi-comatose, and suffering from urgent dyspnoea: she died four hours after admission. On *post-mortem* examination, pneumonia of the right lung was discovered; it had commenced at the upper lobe, which was in a state of grey hepatisation; the middle lobe was red, while the lower lobe and the left lung were free. This was a very fatal form of pneumonia, probably on account of the rapidity of its course. 2. A woman, aged 40, died of a relapse; the breathing becoming very laboured only towards the last. Physical signs of effusion into the chest were detected on the third day: and, after death, two points of effusion were found in the left pleura, which presented all the marks of recent pleurisy. The lung was compressed; and contained six or seven small abscesses situated close to the pleura. The centre of the lower lobe of the lung was spongy, apparently proceeding to supuration. The veins were filled with a firm deposit, resembling plaster of Paris. Dr. Kennedy considered the inflammation in this case as allied to what is now called diffused inflammation. The author then made some observations on the latency of symptoms of chest-diseases; shewing that, although the external symptoms may be present, the stethoscope often fails to discover any physical signs till the lapse of twenty-four, forty-eight, or even sixty hours.

HYDROCEPHALUS. DR. BATTERSBY related the case of Chronic Hydrocephalus with Scrofulous Deposit in the Brain, which was given at p. 790 of this *Journal* for August.

FEBRUARY 23, 1850.

ANDREW ELLIS, ESQ. IN THE CHAIR.

STRANGULATED HERNIA SIMULATING HYDROCELE. DR. MACDONNELL related a case of Scrotal Hernia, which resembled Hydrocele in being translucent when viewed by the aid of a candle. This was the first time he had observed such a case; but several had occurred to Sir P. Crampton. The tumour was reduced while the patient was in bed, after having been in a warm bath.

DR. STAPLETON related a case, in which Hernia and Hydrocele co-existed in a boy, in whom the former was evidently kept up by the latter, as by a truss.

RETENTION OF URINE: IMMENSE ACCUMULATION. DR. BENSON related a case of Retention of Urine from Paralysis of the Bladder, communicated to him by Mr. B. Lane, of Articlave, Coleraine. It occurred after labour; and, after three days, six quarts of urine were drawn off by the catheter.

ON THE COD-LIVER OIL OF COMMERCE, AND THE BENEFICIAL EFFECTS OF THE CHEAPER FISH OILS. DR. BAGOT believed that much train-oil was sold as "*Oleum Jecoris Aselli*"; and that the effects were similar to those produced by Cod-Liver Oil. He related a case, in which the patient gained weight under its use. He felt quite certain, that other fish oils were equally useful in the treatment of phthisis; and if this proved to be true, the discovery would be invaluable to those in poor circumstances. Spermin and whale oils could not be substituted for Cod-Liver Oil, both from their smell and taste. Neither did they afford the violet colour with sulphuric acid. Whether those oils, which are procured from the mammalia, have the same fattening powers which the fish oils possess, had not been yet ascertained.

SUMMARY OF DISCUSSION. DR. JACOB believed that a liver oil was got from the liver of the basking shark, and sold in the shops. He thought it not at all unlikely, that it would form a pretty good substitute for the genuine Cod Oil. It was well known, that oil was largely extracted from the intestines of herrings by the persons employed in curing them. The oils which came from Newfoundland were not all derived from the *Gadus Morrhua*, but were procured from many other *gadidae*, amongst which the hake and the ling were, in all probability, included, and also probably the haddock, which was a *gadus*; at all events, there was some reason to believe that it was not absolutely essential for medicinal purposes to procure the oil from any particular species of the cod.

DR. H. KENNEDY observed that the remarks which had just fallen from Dr. Jacob were fully borne out in the work of De Jongh. This writer mentioned several fishes from which oil, identical in properties with that procured from the liver of the common cod, might be obtained; and not long since, the *Medical and Surgical Journal* contained an account, similar to that in Dr. Bagot's paper, of a number of cases in which different fish oils were found to act fully as well as the genuine Cod-Liver Oil.

DR. STAPLETON was of opinion, that whenever pure Cod-Liver Oil could be had, they ought to use it. The liver of the cod had been found peculiarly efficacious in the treatment of rheumatic affections amongst the Norwegian fishermen. In Norway it was not used as oil alone, but was taken in the liver itself. The latter was extracted from the fish, was put into the stomach, which was removed from the cod for the purpose, and, some salt and pepper being added, the stomach was filled up with water, and tied at one end. The whole was then boiled, and the liver thus prepared, being used as an article of diet, was found highly beneficial in the treatment of rheumatism. But there was only one period of the season, at which the liver of the cod

yielded the oil in a state of purity ; namely, just in the beginning of the season, when the liver was of a light cream colour. As the season drew towards its close, the liver gradually acquired a reddish hue ; and when such was the case, scarcely any oil could be obtained. In the beginning of the season it was obtained by "cold expression"; but towards the close, it could only be procured by boiling the livers, in which case, the product was exceedingly thick, had a most disagreeable odour, and would not sit easily upon the stomach.

DR. JACOB thought the quality of the oil at different periods of the season was probably more or less connected with the generative functions of the fish. If they wanted to obtain the oil pure and comparatively free from a disagreeable odour, it must be procured by pressure ; for the oil was not diffused throughout the structure of the liver, but confined within cells. If they endeavoured, by chemical agency, or a moderate temperature, to extract the oil, their efforts could not be attended with much success, because it was confined in the fat cells, and these could only be ruptured by compression. Having learned the exact season of the year when the oil is contained, in purity and abundance, in the liver of the cod, the question arose : whether their best course would not be to give the liver itself to the patient to be eaten, after the custom of the Norwegian fishermen ? The value of the oil might depend very much upon the nature of the food upon which the fishes lived ; for some fish probably subsisted upon a kind of food that could not furnish it with the elements of oil ; and even if it did, the oil might not be of the right description.

MARCH 9, 1850.

ANDREW ELLIS, ESQ., IN THE CHAIR.

ORGANIC ELECTRIC ACTION OF THE SPLEEN. SIR JAMES MURRAY read a paper, in which he expounded his views on this subject. The following were some of his deductions. 1. Series of electric currents emanate from the *Spleen to the stomach* during digestion. 2. The activity of these currents varies, according to the degree of splenic distension by the blood through the vessels of the Spleen. 3. The currents of electricity are intense, in direct proportion to the blood's heat, to the pressure exerted on the Spleen during inspiration, and to the impulse and friction of the circulation in the large splenic arterial branches. 4. In a minor degree, similar phenomena ensue, even out of the animal ; when a recent Spleen is insulated, and then injected with warm water, but still more so, with hot liquors, containing such saline ingredients as prevail in the blood. 5. A Spleen thus treated, determines a positive current towards its gastric surface, when tested delicately by gold and silver wires. 6. Contraction of erectile tissue ensues when the extremities of a gold and silver wire touch at one point the nerve, and at another the erectile tissue of the Spleen. 7. Contraction, to some extent, seems to be produced when two cups filled with water are united by a metallic arc, one end of a Spleen being immersed in one of the cups, and the opposite extremity in the other cup. But more experience is required on this point. 8. Discs, or slices of spleen, placed upon each other, were, in most instances, better voltaic piles than similar batteries constructed from equal weight of brain, liver, kidney, pancreas, or even of muscular flesh. 9. Slices of Spleen were better conductors than equal sections of any of the above materials, particularly when moistened by warm saline fluids, or even by tepid distilled water. 10. The intensity of galvanic currents along the *vasa brevia*, from the Spleen to the stomach, continues through the gastric coats in the recently-swallowed ingesta, and the gastric juice seems thereby to derive and exert some galvanic influence upon the pulpy aliment. 11. The stomach and its contents are to be considered as *passive receivers or conductors* of galvanic influence, but the Spleen is endowed with active powers of generating or creating voltaic evolutions, under favourable degrees of repletion of its vessels, tension of its erectile tissue, and of auxiliary thermo-electric principles.

MARCH 23, 1850.

DR. JACOB IN THE CHAIR.

CASE OF COMPLETE MORTIFICATION OF BOTH FEET AFTER EXPOSURE TO COLD, WITH REMARKS. By O'B. BELLINGHAM, M.D. CASE. D. M., a labourer, aged about 30, was admitted into St. Vincent's Hospital, February 23, 1850, labouring under Gangrene of both feet. He had worked at his employment as a labourer up to Christmas week. He was much exposed to wet, but had a sufficiency of food, which consisted of bread and stirabout. On the 3rd of January he was in his usual health, and went to bed quite well. In about two hours, he began to suffer from pain and heat, referred particularly to the instep of both feet, and he had no sleep that night. In the morning, both feet and legs, as high as the calves, were swollen and of a purple colour; they felt hot and sore; he could not put on his shoes, nor stand; sensation, however, was perfect, and continued to be so for two days. The swelling, which extended at first to the calves of the legs, diminished subsequently; and in two days the feet had become of a black colour, and had lost all sensibility.

The following was his condition on admission. The patient was a poor emaciated creature, the hands and chest presenting a copious eruption of scabies. Both knees were flexed, the patient could not extend them, and the ham-string tendons were very tense. The feet were perfectly black, hard, shrivelled, and dry, except about the ankles; there the parts were moist, and gave out the usual offensive smell of gangrene; the separation had been as complete through the tendo-Achillis and the other tendons of the leg, as in the surrounding soft parts. About two inches above the ankles, the tibia and fibula of both legs were perfectly bare to an extent of between two and three inches, and almost exactly at the same part in each. The bones, where exposed, were white, dry, and destitute of periosteum. At the points above where the gangrenous had separated from the living parts, granulations were abundant. The patient lay upon his back, with the legs drawn up, and the gangrened feet resting upon the bed. His appetite was very good, but there was a tendency to diarrhoea; the tongue was dry; he slept badly, but was not kept awake by pain; he complained only of soreness and heat in the lower part of the legs; the pulse was 90, rather feeble.

March 1st. Operation. The tibia and fibula of the right leg were sawn across at the part at which the bones were bare. There was no bleeding from the bone; the medullary canal of the tibia contained a quantity of healthy pus. *2nd.* The right limb had been easier since the bones were sawn across. On sawing across the other limb, the medullary canal of the tibia appeared to be dry; there was no pus in it. *9th.* The patient appeared to have gained flesh: his appetite was very good; the tongue was clean; there was no thirst or diarrhoea; he slept well; and the discharge from the stumps consisted of healthy pus. *21st.* The patient had no pain; he was able now to extend the limbs, which he could not do on his admission; the exposed portions of the tibia and fibula were white and dry; the discharge from the granulating surface was healthy; the patient had gained strength, ate and slept well, and was able now to sit up in bed.

REMARKS. The gangrene in this case would appear to have had its origin in exposure to cold. The coldest day in Dublin last winter was the 31st of December, when the thermometer descended to 19° F., that is, thirteen degrees below the freezing point; and for two days previously, it had been as low as 22, while at the period at which the gangrene supervened in this case, viz., on the 3rd of January, the thermometer in Dublin was not below 35°, or three degrees above the freezing point, and in the warmest part of the twenty-four hours of that day it rose to 47° F. Gangrene does not so often ensue during the prevalence of severe cold as after it, if the temperature suddenly rise some degrees above the freezing point. When it does occur during severe cold, it is owing to the imprudence of the persons in exposing

the part to an elevated temperature. This has been noticed by Larrey, in his *Military Surgery*. Parts which have been frost-bitten very soon pass into gangrene if exposed suddenly to heat. The most intense degree of cold does not apparently destroy the vitality of the part at once; when a portion of an extremity has been frost-bitten, it can almost always be restored by using proper measures.

In the subsequent treatment, should the case be left to nature, or should amputation below the knees be performed? Larrey recommends the latter proceeding, if the gangrene have caused the death of the entire thickness of the limb. The efforts of nature are then insufficient, the vital organs become enfeebled by the process of exfoliation, and before this happens, the patient dies of exhaustion, or of the effects of resorption. This applies with more force to a case in which both extremities have become gangrenous. If, indeed, recovery take place by the unaided efforts of nature, it is not unlikely that the patient would suffer so much inconvenience, that after a time he would be glad to have amputation performed below the knees.

CASE OF PERINEAL ABSCESS, IN WHICH THE PUS MADE ITS WAY INTO THE SCROTUM. By MR. RUMLEY. A man, who was engaged as a clerk in a solicitor's office, told Mr. Rumley, the 19th of March, 1850, that he had suffered from severe pain about his fundament during the last five or six days, and that he was apprehensive he was about to have a fistula. On making an examination, Mr. Rumley found, between the tuberosity of the ischium and the ramus of the os pubis, a red, painful, and fluctuating tumour. There could be no doubt at all that matter had collected in this situation, and accordingly he advised the man to have it opened without loss of time. He declined to allow the operation to be performed then, having some pressing business. On his way home in a car, the wheel came against a brick, but the jolt he received caused him scarcely any pain, and in fact, from that moment, he could sit much easier upon the car. At half-past five on the following morning, he was visited by Mr. Rumley, who found him suffering violent pain in the scrotum. The scrotum was very much enlarged, reddened, and tender to the touch. On examining the perineum, the tumour was nearly gone, but the part still retained more or less of a doughy feel. It now occurred to him for the first time, that the matter might have found its way into the scrotum. He made an incision into the perineum, on doing which exit was given to a small quantity of a rather good description of matter. Two days after, he observed a small blue spot upon the scrotum, about the size of a fourpenny piece, and he then made an incision into the scrotum, and gave discharge to a small amount of matter. Two days later, a slough appeared on the scrotum; a large portion of the cellular substance beneath the integuments had sloughed away. During the whole progress of the case, there were none of the signs of urinary irritation present. The patient lost a portion of his scrotum of about the size of a half-crown piece. From day to day the patient became better and better; granulations started up from the tunica vaginalis, and he made a favourable recovery.

APRIL 6, 1850.

ANDREW ELLIS, Esq., IN THE CHAIR.

CASE OF MILK IN THE BREASTS OF A MALE INFANT. By DR. F. BATTERSBY. After referring to instances cited by authors, in which milk had been found in the breasts of virgins and men, as well as of male animals, Dr. Battersby related the following case.

CASE. J. K., aged three weeks, was brought to Dr. Battersby on the 3rd of last May by his nurse, who informed him that she received him from his mother eight days before. She then found the breasts swollen and hard, and with milk in them. The breasts had since become smaller, but were still of the size of large walnuts, with the soft hardness peculiar to breasts full of milk.

They were quite round and moveable, seemed tender to the touch, and were rather red on the surface. The nipples were of a size proportionate to that of the breasts. The child had some bronchitis. 7th. Dr. Battersby pressed some milk out of the breasts. 12th. He withdrew, by gentle pressure on the breasts, nearly a drachm of milk. It was precisely similar in appearance to woman's milk. Mr. Moore examined it, with the following result. It was alkaline, threw up a cream, was not rendered viscid by caustic potash, nor did it coagulate when heated. Viewed under the microscope, it was seen to consist of normal milk-globules of various sizes; on the whole, smaller than those contained in ordinary human milk, floating in a colourless fluid. It contained a very few colostric bodies, and some epithelium.

It was to be regretted, that the presence of casein was not here determined. The quantity of milk submitted to examination was so small, that many experiments could not be tried. The fact of heat producing no coagulation, and of the fluid remaining unaltered on the addition of caustic potash, proved the absence of the colostric character. The breasts subsided, and the child was healthy.

SUMMARY OF DISCUSSION. DRs. GEOGHEGAN and DARBY had seen milk extracted from the nipples of very young male children. In one case, Dr. Geoghegan examined the supposed milk, and found it to contain the oil-globules and granular bodies observed in the colostrum, or first milk after parturition, but he did not submit the specimen to a chemical analysis. Nurse-tenders look upon the thing as by no means uncommon; and are in the habit of rubbing the swelling surrounding the nipple, to facilitate the escape of the fluid.

DR. BUTCHER had, on one occasion, found a distinct mammary gland in a male child which he dissected; the mammary apparatus of this child was fully two inches in circumference.

ON THE AMOUNT OF RESPIRATION HEARD IN THE ORDINARY DISEASES OF THE CHEST. By HENRY KENNEDY, A.B., M.B. It had long been a recognized fact, that the lungs might be quite pervious, and yet the amount of respiration heard by the stethoscope might be comparatively little or none. Dr. Kennedy did not speak of idiosyncrasies, where the intensity of the respiratory murmur, even in health, presented such differences; but he alluded to disease, as, for example, cases of bronchitis. Frequently, in these, the respiration at first appeared quite natural and free; and yet a more prolonged examination showed the *râles* to exist extensively. This often occurred in the adult, but more frequently in the child. In cases of fever it was very common; so much so, that it was a point for which one should be prepared; for these were cases in which it might be much more readily overlooked. The lungs being only partially filled, under such circumstances no *râles* might be audible, though at the very same moment they might become so, if, by any means, the respiration got stronger. In children suffering from almost any general derangement, the breathing was almost universally performed with great rapidity. It was what might be called shallow respiration: the number of inspirations making up, as it were, for the slower breathing of health. Both bronchitis and pneumonia might hence exist, and yet be overlooked; because the air did not reach the affected portion of the lung, unless a deep inspiration were made. Some cases of phthisis, too, presented examples of the same point. In the child, pneumonia might more readily be overlooked than bronchitis.

With regard to the alleged perfect disappearance of respiration, in solidification from pneumonia, Dr. Kennedy expressed his conviction that an example of absolute solidity could not be found, as the result of pneumonic inflammation. However parts of the organ might be solidified, the larger bronchial tubes, and some of the smaller ones too, still remained open. Hence, as far as the lung was concerned, there was no reason why the air might not traverse these open tubes, and so be made manifest to the ear; and no example of pneumonia had come under his notice, where all forms of respiration were

completely absent, although he was well aware that high authority had stated this to be the case when the entire lung was solidified. That the respiration under these circumstances was weak, and hard to catch, was admitted; but there was a difference between weakness of respiration and its entire absence. The patient, either from pain or weakness, might not make an exertion capable of drawing the air into the parts of the lung still permeable.

In the majority of instances, the diagnosis between pneumonia and pleuritis was comparatively easy, but the exceptional cases were sufficiently frequent to entitle them to a particular notice. Once, indeed, any signs of displacement of the surrounding viscera took place, the case was put beyond any doubt; but short of this, cases had occurred to Dr. Kennedy repeatedly, where days had passed without his being able to satisfy himself on this point. The difficulty mostly arose, from the same case presenting the symptoms both of pneumonia and of pleuritis. Effusion, to a considerable extent, in a good many cases, did not prevent the respiration from being heard. A considerable difference existed in this respect. Thus, in some, he had found it impossible to detect any sort of breathing longer than forty-eight hours after the attack commenced, except of course towards the root and upper portion of the lung; while, in other instances, the respiration continued to be distinctly audible below, at a time when the effusion was as distinctly on the increase; and that this was not due to any adhesions, was plain from the subsequent progress of the cases. The only explanation he could offer of this was, that possibly the lung had much greater powers of resistance to the pressure of fluid surrounding it than was commonly supposed; and that hence it might have the power of expanding; the whole side of course dilating with it, though at the next moment it yielded to the pressure exercised by the ribs and the surrounding fluid. As some confirmation of this view of the question, two points might be mentioned; 1. When pleuritic effusions occurred in children, the lung, as far as Dr. Kennedy saw, did not appear to yield to the pressure of the fluid, in the same degree as took place commonly in the adult. 2. In cases where passive effusions occurred, an amount of respiration was commonly heard much greater than what might be expected, from the quantity of fluid poured out.

The following were Dr. Kennedy's conclusions: 1. That in no stage or form of pneumonia was respiration entirely absent. 2. That in some cases of pleuritic effusion, respiration over the side continued to be heard, after the fluid had accumulated to such an extent as to give complete dulness on percussion from top to bottom.

CASE OF WRY-NECK: DIVISION OF THE STERNAL ORIGIN OF THE STERNO-MASTOID MUSCLE: CURE. By O'B. BELLINGHAM, M.D.

CASE. James Fitzpatrick, aged 15, was admitted into St. Vincent's Hospital, September 22, 1849, labouring under Wry-Neck. The affection commenced when he was five years old, at which period he suffered for some time from pain in the left ear, which caused him to incline his head towards that side. Two years afterwards, the deformity was quite perceptible, and it had increased much within the last four years. The head was drawn downwards towards the left shoulder; the right shoulder was elevated; the sternal portion of the left sterno-mastoid muscle, from its origin to the mastoid process, was very tense and prominent; its edge forming a sharp ridge from the one point to the other. As the patient looked straight forward, it formed almost a right angle with the clavicle, while the right sterno-mastoid muscle formed a very acute angle. The left sterno-mastoid muscle, from its sternal origin to the mastoid process, measured three inches, while the right measured four inches and a half. The right side of the face was much better developed and fuller than the other, apparently as if the two sides of the face were those of different persons; the chin was inclined towards the sound side, the right eye, the right side of the mouth, and of the nose, were upon a plane higher than on the other side; a difference of half an inch was found upon

measurement on each side; from the angle of the mouth to the outer angle of the eye on the sound side measuring three inches, while on the diseased side it was only two inches and a half. Behind the insertion of the sterno-mastoid muscle, there was a considerable hollow upon the affected side. The right side of the cranium appeared to be larger than the left, and the right side of the thorax likewise seemed to be better developed than upon the diseased side.

October 5th. The sternal origin of the sterno-mastoid muscle, being that which was engaged in keeping up the deformity, was divided to-day by the subcutaneous section, a very narrow straight knife being used. A little colodion was put upon the incision in the skin, some adhesive plaster over it, a high and stiff stock was then put round the patient's neck, and a double headed roller round the head, and the patient was placed in bed, with the head upon a low pillow, and the ends of the roller were fastened behind his head to the legs of the bed above. After a few days, he was allowed to get up, and the only apparatus used was a high and stiff stock, higher upon the affected side than the other, which he wore night and day. The wound healed by the first intention, leaving scarcely any mark; and the patient left the hospital November 5th, the head being quite straight, but the face still preserving much of the peculiar appearance which it had before the operation.

This case served to strengthen the opinion advanced by M. Guérin, that the sternal portion of this muscle is alone engaged in keeping up the deformity in the majority of cases of Wry-Neck.

APRIL 20, 1850.

DR. JACOB IN THE CHAIR.

CONGENITAL HYPERTROPHY OF THE FINGERS AND TOES. By FRANCIS BATTERSBY, M.B. After referring to a case of Hypertrophy of the Hand, exhibited to the Surgical Society by Mr. R. F. Power in 1839, and the cases described by Mr. Curling in the twenty-eighth volume of the *Medico-Chirurgical Transactions*, Dr. Battersby related the following case. W. Walsh, aged 16 months, was born with the second toe of the left foot in length and breadth far exceeding the others. It had since grown apace with the other toes, and retaining its unnatural size, gave the foot a very remarkable appearance. It was seven-eighths of an inch longer than the great toe, which was five-eighths of an inch less in circumference. It was one inch and two-eighths larger than the corresponding toe of the opposite foot. The third toe was slightly hypertrophied, and inclined outwards from the second. The soft commissure between these toes, looking at the dorsal aspect of the foot, was advanced half an inch from its natural position. The sole of the foot was occupied by a large fatty protuberance, making the circumference of the foot an inch in extent more than the right foot. The mother had no idea of anything being wrong with the child when it was born, and neither of the parents ever knew of such a malformation before. The child was a very fine one in every other respect. He walked as well as other children of his age, but his toes, owing to their size, and the large soft ball in the centre of the foot, were not then flexed, like the toes of the right foot, although the joints of the enlarged toes were naturally moveable.

EARLY OPERATION IN CASES OF HARE-LIP. DR. O'B. BELLINGHAM read the notes of several cases, in which he had operated for Hare-lip on children at an early age; after which, he made the following remarks. The attention of the profession was first called to the advantages of an early operation in cases of Hare-Lip in 1842, by the late Dr. Houston. Since that period, the operation had been performed in numerous instances in this country, and sometimes upon infants of a very tender age, as a few days, or a few weeks after birth. In only two of the cases which he detailed, the operation was

performed within a few weeks after birth; in the others the patients were not brought to him until they were some years old. When a fissure in the upper maxillary bone and palate complicated the Hare-lip, Dr. B. said, that if the infant were operated upon a few days, or a few weeks after birth, the fissure in the bone would gradually diminish, and become almost completely obliterated as the child grew up; whereas if the operation were deferred until later in life, the fissure in the bone would rather become wider. Again, the earlier the operation was performed, the more quickly would the wound unite, owing to the vascularity of the parts; hence the cicatrix would be slighter, and the mark would become almost imperceptible as the child grew up. In the very young infant, the operation was less severe, the parts which required to be excised had not the thickness or the firmness which they acquired later in life; they yielded also more readily, and bore a greater stress from the needles used in the operation, than when the child was older. Besides, the resistance offered by an infant of only a few weeks old, both during and after the operation, was much less than of one a few months old; the operation was therefore performed with greater facility; while its success became more certain, because the feeble crying of an infant at that age had a less tendency to divaricate the edges of the incision than would be the case if it were older. The only objection of any force which had been urged, was the liability of infants to convulsions at this period of life from trifling sources of irritation. Dr. Bellingham was not aware of any case recorded within the last few years where the death of the infant could be referred to this cause, although the operation had been performed in numerous instances at a very early age. If the child was very irritable after the operation, particularly if it cried much, the drag upon the needles would be increased, and the operation might fail in consequence.

SUMMARY OF DISCUSSION. DR. JACOB was in the habit of operating in congenital cataract before the teething period commenced, and he found that the little patients got on far better than when he used to operate at a later period, owing, he believed, to the fact, that the process of absorption went on with greater rapidity, and that children seemed to be less liable to inflammation in the former instance than in the latter.

PROFESSOR SMITH brought forward five or six cases, in half of which the operation for Hare-Lip was performed when the children were less than one year old, and the remainder at a different period, and it appeared that, so far as the operation was concerned, they all did exceedingly well; but in the late operation, the patients did not become restless, so as to require the administration of anodynes.

DR. H. KENNEDY was able, from his own observation, to testify in favour of the early operation. It was more easily performed, and the danger attending it was much less, when the child was but a few days old, than it was at eight weeks. In addition, should hæmorrhage occur at the time of the operation, it would be easily controlled. His impression was, that there was no period of early childhood, from the first week to the end of the first two months of the infant's existence, at which the operation might not be performed with perfect safety.

MISCELLANEOUS INTELLIGENCE.

FINANCIAL STATE OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, AT MIDSUMMER 1850. From a statement (just published) of the receipts and expenditure of this Institution, during the past year, it appears that the former amounted to £11,722 : 2 : 7, and the latter to £11,031 : 18 : 2. The following are the sources of income; with the amount from each:—

Fees from Court of Examiners - - - - -	£8,705 15 0
Fees on admission to the fellowship - - - - -	430 10 0
Certificates of having received the diploma - - -	5 5 0
Fees on admission to Council and Court of Examiners	105 0 0
Sale of Lists of Members, Catalogues, etc. - - -	55 10 9
Dividends on investments in Government Securities -	970 1 10
Produce of Policy of Assurance on life of Mr. Clift -	1,450 0 0
Total - - -	£11,722 2 7

The disbursements are divided under the following heads, viz.:—*College Department*, including council, court of examiners, auditors, fellowship, diploma stamps, list of members, law expenses, salaries, wages, coals, etc., £5,576 : 8 : 8. *Museum Department*, including catalogues, specimens, spirit, bottles, studentships, salaries, wages, etc., £2,122 : 5. *Library Department*, including purchase and binding of books, salary, etc., £407 : 3 : 4. *Miscellaneous*, including taxes, insurance, furniture, etc., £491 : 3 : 7. Repairs and painting, £132 : 5 : 7. *Under Deeds of Trust*, including oration, lectures, and prizes, £388 : 4 : 6. Purchase of £500, 3 per cent. consols, £464 : 7 : 6. Purchase of £1,518 : 6 : 6 reduced 3 per cents. in trust for Mrs. Owen, £1,450. Balance due to the bankers, 30th June, 1849, £65 : 15 : 4. Balance at the bankers, Midsummer-day, 1850, £624 : 9 : 1. Total £11,722. From the published statement it will be perceived, that the incidental income amounts to £10,752 : 0 : 9; the permanent income to £970 : 1 : 10. The incidental expenditure to £7,525 : 16 : 6; and the permanent expenditure to £3,506 : 1 : 8.

MEDICAL SOCIETY OF LONDON. This institution has commenced its meetings for the session with most favourable prospects of success, if we are to judge from the large attendance of members, and from the excellence of the papers which have been already read. The energy which the officers of the amalgamated societies have lately shewn, will no doubt have a beneficial effect on those who have the control of the Royal Medical and Chirurgical Society. A little friendly rivalry often promotes the development of powers which would otherwise remain latent. We hope to see both societies go on increasing in prosperity and usefulness.

In the Medical Society, G. J. Guthrie, Esq., F.R.S., and Dr. G. Owen Rees, have been elected Lettsoman Professors; and the following members of Sectional Committees have been appointed:

<i>Medicine.</i>	<i>Surgery.</i>	<i>Midwifery.</i>
Dr. Webster.	Mr. Hancock.	Dr. Murphy.
— Sibson.	— Dendy.	— Chowne.
— J. R. Bennett.	— Pilcher.	— Merriman.
— Copland.	— Erichsen.	— Smiles.
— Garrod.	— Hird.	— T. Smith.
— Lankester.	— Hilton.	— Lever.
Mr. Headland.	— Toynbee.	Mr. Greenhalgh.

The following COMMITTEES OF REFEREES have also been appointed :

<i>Medicine.</i>	<i>Surgery.</i>	<i>Midwifery.</i>
Dr. Lankester.	Mr. Hancock.	Dr. Murphy.
— Sibson.	— Hird.	— T. Smith.
— Webster.	— Pilcher.	— J. H. Bennet.
— Sayer.	— Coulson.	— Tilt.
— Snow.	— Robarts.	Mr. Greenhalgh.
— Woodfall.	— Wade.	— Brown.
Mr. Streeter.		
— Headland.		

LETTSOMIAN PROFESSORS.

G. S. Guthrie, Esq., F.R.S., will lecture on the 6th, 13th, and 27th of February, at four o'clock, on the Means adopted by Nature to Assist Hæmorrhage from the Larger Arteries.

Dr. O. REES will lecture in May on the Pathological Indications afforded by the Urine.

RETIREMENT OF SIR JAMES M'GRIGOR FROM THE OFFICE OF INSPECTOR-GENERAL OF THE MEDICAL DEPARTMENT OF THE ARMY. Sir James M'Grigor, having for thirty-five years worthily discharged the duties of Inspector-General of the Medical Department of the British Army, has lately retired. An excellent account of his life, and of the services which he has rendered, in promoting the diffusion of professional knowledge among the medical officers of the army, as well as in raising the department over which he has presided to its present admirable state of organization, will be found in the *Lancet* for October 12, 1850.

MEDICAL FACULTY OF MADRID. By a decree, of date August 20, 1850, the Queen of Spain has created three new special clinical professorships, viz., for Syphilis, Skin Diseases, and the Eye. The first appointments have been conferred on Drs. Salazar, Alonso, and Calvo, at salaries of 12,000 rials each, which is about £120 sterling. Future appointments are to be filled up by *concours*. This is a movement in the right direction ; but medical science is at a low ebb in Madrid,—globulism, and other forms of quackery as non-sensical and audacious, being more painfully visible in the profession than in any other capital of Europe.

MEDICAL JOURNALISM IN SPAIN. From an official document, published at Madrid, it appears that the various medical periodicals of Spain, collectively, possess a circulation scarcely sufficient to enable one journal to pay its way in London. Nine works share among them 929 subscribers !! The following list shows how they are apportioned :

Boletin de Medicina	369
Union	160
Revista Quimico-Farmaceutica	136
Restaurador-Farmaceutico	107
Gaceta Medica	64
Echo de la Medicina	32
El Parte Medico	19

Two pseudo-medical journals, the Propagador Homœopatico, and the Boletin Hahnemanianno, have between them fifty-two subscribers.

SANITARY PROCEEDINGS AT HULL. At a meeting of medical practitioners, resident in Hull, held on Saturday, the 19th inst., at the General Infirmary, it was unanimously resolved, in reply to a letter received from the mayor, on the subject of cholera,—That this meeting, although fully cognizant of

the prevalence of cholera in Hull, and deeply aware of the necessity of carefully watching its progress, is not of opinion that any necessity exists to adopt decisive measures on the subject. It would, however, suggest to the Sculcoates' Board of Guardians the desirableness of imitating the Hull Board, in requesting their medical officers to attend to all cases of emergency, without an order. According to the returns of the superintendent registrars, it appears that forty-two fatal cases have occurred, since the 1st of September, in Hull and Sculcoates conjointly.

ATTEMPTED DARING ROBBERY BY THE AID OF CHLOROFORM. Both the *Kendal Mercury* and the *Carlisle Journal* contain an account of an attempt made, in Kendal, on Sunday week last, to rob an elderly clergyman by the aid of Chloroform. The clergyman, who was temporarily visiting the town, had taken up his residence at an hotel, to which also the person charged with the nefarious act resorted, as is supposed, for its express purpose. The aged gentleman had retired to bed early on the night of the 13th inst., and being unable to lock his door, had secured himself against intruders, but inefficiently; he was subsequently awakened by the attempt of a person to render him powerless by placing a cloth over his mouth; and at the time of his rescue by those whom his cries brought to the apartment, a strong smell of Chloroform is reported to have been perceptible, and two bottles of that substance are said to have been discovered. The matter will undergo investigation at the sessions. It is not the first time than an agent of good has been converted into an instrument of evil.

SIGNOR SARTI, late the proprietor of the Florentine anatomical and other models in wax, formerly exhibited in the metropolis, and, since then, in various other towns of England, has lately died at Boston, in the United States. He was a native of Florence, and is stated to have been an accomplished man, and married to an English lady. Signor Sarti was the first to introduce into this country the ingenious and elaborate specimens of Florentine art, showing the structure of the human frame.

BURIAL CLUBS: THE NEW ACT OF PARLIAMENT. In the new Friendly Societies' Act, there is an important provision respecting Burial Clubs. In future the money to be paid on the death of a child under ten years old must be under £3, and can only be paid to the undertaker for actual expenses occurred. No money must be paid on the death of a husband, wife, or child enrolled, except on production of a certificate from a physician, surgeon, apothecary, or coroner, according to a form annexed to the Act, that the party had not been deprived of life by any person interested in obtaining the burial money. If any officer of a Society pay the money without such a certificate, he will be liable to a penalty of £10, one-half of which will go to the informer.

MURDEROUS ATTACK ON A PHYSICIAN. The *Union Médicale* for October 17th, quotes the following from the *Gazette de Cambrai*. Dr. Eugène Delporte was summoned one morning lately, between four and five o'clock, under the pretext of visiting a patient. While proceeding to the house, an individual, armed with a sword, rushed on him and wounded him in the head; a second stroke removed three of the fingers of his left hand, together with one ear, and a part of his cheek; a third stroke wounded his skull, and was probably only prevented by his wig from injuring his brain. His cries having alarmed the neighbours, the assassin fled, but has been since arrested. No cause is assigned for the perpetration of this act.

"INSTITUT URO-CHIRURGICAL." An institution under this name has been recently opened in the immediate neighbourhood of Paris. It is a specula-

tion of M. Mercier, and its object is to afford billiards, baths, boating, and all sorts of amusements to those who may thither resort for the cure of affections of the genito-urinary organs! The rate at which Hydropathic Establishments, Lunatic Asylums, and Sanatoriums of various descriptions are multiplying both at home and abroad speaks volumes as to the present distressed state of the medical profession.

APPOINTMENTS.

- BURTON, Dr., appointed, by the Lord Lieutenant of Ireland, Resident Physician and Governor of Maryborough District Lunatic Asylum.
 GUTHRIE, G. J., Esq., F.R.S., appointed Lettsomian Lecturer on Surgery to the Medical Society of London.
 HUNTER, Dr., elected Lecturer on Surgery in the Andersonian University, Glasgow, in the room of Dr. LAWRIE, elected Professor of Surgery in the University of that city.
 REES, Dr. G. Owen, F.R.S., appointed Lettsomian Lecturer on Medicine to the Medical Society of London.
 WATSON, Dr. Ebenezer, elected Professor of the Institute of Medicine in the Andersonian University, Glasgow. The number of votes were, for Dr. WATSON, 30; for Dr. JOSEPH BELL, 27.

OBITUARY.

- BATES, William, Esq., Surgeon, of George Street, Blackfriars' Road, aged 58, on 14th October.
 BOOTH, Dr. W. L., Assistant-Surgeon, United States Army, at Monterey, California, on 14th August.
 BURTON, Dr. Ed. W., Staff-Surgeon, Senior Resident Medical Officer at the General Military Hospital, Dublin, on 11th October.
 ELLIOTSON, Dr. Thomas, at Malta, on 1st August.
 FOGO, T. M., M.D., late of the Royal Artillery, at Tiverton, Devon, on 18th Sept.
 FOUQUIER, M. le Dr., Professor of Clinical Medicine to the Faculty, at Paris, aged 74, lately.
 GIBSON, Thomas, Esq., Surgeon R.N., late of Doune, Scotland, at Hobart Town, Van Diemen's Land, on 15th April.
 GRAHAM, Dr. R.N., on board the Hon. E.I.C. steamer *Phlegethon*, at Whampoa, aged 32, on 13th July.
 GRUBB, Dr. Robert, of Dalston, aged 55, on 30th September.
 MAGINNIS, Dr. Isaac, of Savannah, drowned at sea, on 4th October.
 M'CREA, Farquhar, M.D., late of the 6th or Enniskillen Dragoon Guards, at Sidney, N.S.W., on 20th April.
 SWIFT, James, Esq., Surgeon R.N., at Worcester, aged 76, on 5th October.
 TAYLOR, John, Esq., Surgeon, at 8, Abercrombie Place, Edinburgh, on 10th Sept.
 THOMPSON, Mr., Surgeon, 69th Regiment, at Malta, lately.

BOOKS RECEIVED.

ADDRESS to a Medical Student. Oxford: 1850. BARKER (Dr. T. H.) on the Diet of Infancy and Childhood. London: 1850. COOKE (Weeden) on Hydrocephalus. London: 1850. ERICHSEN, Introductory Lecture on the Study of Surgery. London: 1850. GALLOWAY'S Manual of Qualitative Analysis. London: 1850. GROVE, Epidemics Explained and Examined. JENNER (Dr. W.) on Typhus and Typhoid Fevers. London: 1850. MONRO (H.) on Insanity. London: 1850. SIMON (John) Lectures on General Pathology. London: 1850. SYMONDS (Dr. J. A.) Introductory Address at the Bristol Institution. London and Bristol: 1850. WEBB (Allan) On the Relations of Hindu, Ancient, and Modern Medicine. Calcutta: 1850. WRIGHT (T. G.) on Cholera in the West Yorkshire Lunatic Asylum. London: 1850.